

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 3, 2004, 07:50:54 ; Search time 33.4337 Seconds

(without alignments)
1047.520 Million cell updates/sec

Title: US-09-852-261-6

Perfect score: 1 GPEFLCGAEVLDALQFVCGD.....TNKMKSGRRRKSGTFPEHK 111

Sequence: 1 GPEFLCGAEVLDALQFVCGD.....TNKMKSGRRRKSGTFPEHK 111

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SPTREMBL 25:*

- 1: sp_archaea:*
- 2: sp_bacteria:*
- 3: sp_fungi:*
- 4: sp_human:*
- 5: sp_invertebrate:*
- 6: sp_mammal:*
- 7: sp_mhc:*
- 8: sp_organelle:*
- 9: sp_plant:*
- 10: sp_protist:*
- 11: sp_virus:*
- 12: sp_vertebrate:*
- 13: sp_unclassified:*
- 14: sp_virus:*
- 15: sp_bacteriophage:*
- 16: sp_bacteriophage:*
- 17: sp_archaea:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	564.5	93.8	139	4 Q13429	Q13429 homo sapien
2	501	83.2	165	11 Q8CAR0	Q8CAR0 mus musculu
3	465	77.2	130	4 Q9NP10	Q9NP10 homo sapien
4	465	77.2	137	4 Q14620	Q14620 homo sapien
5	462	76.7	139	6 P79167	P79167 equus caball
6	460	76.4	133	6 Q9N1C1	Q9N1C1 bos taurus
7	450	74.8	153	11 Q8C4U6	Q8C4U6 mus musculu
8	447	74.3	127	11 P97899	P97899 ratu
9	419	69.6	153	13 Q93380	Q93380 melesgris g
10	404	67.1	161	13 Q91230	Q91230 oncorhynch
11	403	66.9	178	13 Q91B70	Q91B70 cyprinus ca
12	402	66.8	145	13 Q91475	Q91475 salmo salar
13	402	66.8	155	13 Q91162	Q91162 oncorhynch
14	402	66.8	188	13 P81268	P81268 oncorhynch
15	402	66.8	188	13 Q91965	Q91965 oncorhynch
16	398	66.1	149	13 Q91231	Q91231 oncorhynch

17	396	65.8	116	13 Q91161	Q91161 oncorhynch
18	395	65.6	117	13 Q91476	Q91476 salmo salar
19	391.5	65.0	186	13 Q800Y5	Q800Y5 siganus gut
20	388	64.5	161	13 Q90VV9	Q90VV9 brachydont
21	384.5	63.9	186	13 Q93527	Q93527 paraliichthy
22	384.5	63.9	186	13 Q91A77	Q91A77 perca flav
23	384	63.8	159	13 Q93607	Q93607 paraliichthy
24	383	63.6	161	13 Q9PWK2	Q9PWK2 carassius a
25	380	63.1	117	13 Q91914	Q91914 ctenopharyn
26	380	63.1	161	13 Q9Y182	Q9Y182 carassius a
27	379	63.0	161	13 Q9S8R6	Q9S8R6 megalobrama
28	379	63.0	161	13 Q800D5	Q800D5 megalobrama
29	377.5	62.7	186	13 Q9PSX5	Q9PSX5 paraliichthy
30	377	62.6	182	13 Q93720	Q93720 oreochromis
31	377	62.6	182	13 P79824	P79824 oreochromis
32	376.5	62.5	182	13 Q42289	Q42289 oreochromis
33	376.5	62.5	185	13 Q57436	Q57436 paraliichthy
34	373	62.0	104	13 Q71107	Q71107 dicentrarch
35	373	62.0	108	13 Q800N0	Q800N0 morone chry
36	373	62.0	108	13 Q800M3	Q800M3 morone saxa
37	373	62.0	108	13 Q800M8	Q800M8 morone chry
38	373	62.0	108	13 Q800M7	Q800M7 morone amer
39	363	60.3	185	13 Q9Y157	Q9Y157 acanthopagr
40	358	59.5	66	6 Q9N1S6	Q9N1S6 capreolus c
41	354.5	58.9	184	13 Q42336	Q42336 myoxocephal
42	336.5	55.9	69	6 Q02807	Q02807 bubalus bub
43	305	50.7	57	6 Q28236	Q28236 cervus elap
44	301.5	50.1	126	13 Q91442	Q91442 squatus aca
45	278	46.2	62	13 Q91A00	Q91A00 carassius a

ALIGNMENTS

RESULT 1

Q13429 PRELIMINARY; PRT; 139 AA.

AC Q13429; 01-NOV-1996 (T-EMBLrel. 01, Created)

DT 01-NOV-1996 (T-EMBLrel. 01, Last sequence update)

DT 01-JUN-2003 (T-EMBLrel. 24, Last annotation update)

DE Insulin-like growth factor-I (Fragment).

OS IGF-I.

GN Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

OX NCBI_TaxID=9606;

RN (1)

RP SEQUENCE FROM N.A.

RC TISSUE=Liver;

RX MEDLINE=95237119; PubMed=7720641;

RA Chew S.L., Lavender P., Clark A.J., Ross R.J.;

RT "An alternatively spliced human insulin-like growth factor-I transcript with hepatic tissue expression that diverts away from the mitogenic IBEI peptide."

RT Mitogenic IBEI peptide."

RL Endocrinology 136:1939-1944(1995).

CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL: U40870; AAA96152.1; -

DR HSSP: P01343; 2GFI.

DR GO: GO:0005576; C:extracellular; IEA.

DR GO: GO:0005179; F:hormone activity; IEA.

DR GO: GO:0007582; P:physiological processes; IEA.

DR InterPro: IPR004825; Ins/IGF/relax.

DR Pfam: PF00049; Insulin; 1.

DR PRINTS: PR00277; INSULINB.

DR SMART: SM00078; IIGF; 1.

DR PROSITE: PS00262; INSULIN; 1.

FT NON_TER

FT 1

FT 139 AA; A62271872CA29DE4 CRC64;

SEQ

Query Match 93.8%; Score 564.5; DB 4; Length 139;

Best Local Similarity 95.5%; Pred. No. 8,1e-60;

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Matches 106; Conservative 1; Mismatches 3; Indels 1; Gaps 1;

QY 1 GPEITCGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPOTGIVDECCFRSCDLRLLEY 60
DB 30 GPEITCGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPOTGIVDECCFRSCDLRLLEY 89
QY 61 CAPLKPAAKARSVRAQHTDMPKTKYQPPSTNKKMKSGRRKSTFEERK 111
DB 90 CAPLKPAAKARSVRAQHTDMPKTKYQPPSTNKKMKSGRRKSTFEERK 139

RESULT 2
Q8CARO PRELIMINARY; PRT; 165 AA.
AC 08CARO;
DT 01-MAR-2003 (TREMBlrel. 23, Created)
DT 01-MAR-2003 (TREMBlrel. 23, Last sequence update)
DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
DE Unknown EST.
GN C730016P09RIK.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Thymus;
RX MEDLINE=22354683; PubMed=1246851;
RA THE FANTOM Consortium.
RA the RIKEN Genome Exploration Research Group Phase I & II Team;
RT "Analysis of the mouse transcriptome based on functional annotation of
RT 60,770 full-length cDNAs."
RL Nature 420:563-573 (2002).
DR EMBL; AK038119; BAC29324.1; -.
DR MGI; MGI:2444166; C730016P09RIK.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; P:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF.1.
DR PROSITE; PS00262; INSULIN; 1.
SQ SEQUENCE 165 AA; 18473 MW; 2CE0D3DA981C3F8 CRC64;

Query Match 83.2%; Score 501; DB 11; Length 165;
Best Local Similarity 90.4%; Pred. No. 4,2e-52;
Matches 94; Conservative 1; Mismatches 9; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPOTGIVDECCFRSCDLRLLEY 60
DB 33 GPEITCGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPOTGIVDECCFRSCDLRLLEY 92
QY 61 CAPLKPAAKARSVRAQHTDMPKTKYQPPSTNKKMKSGRRKSG 104
DB 93 CAPLKPAAKARSVRAQHTDMPKTKYQPPSTNKKMKSGRRKSG 136

RESULT 3
Q9NP10 PRELIMINARY; PRT; 130 AA.
AC 09NP10;
DT 01-OCT-2000 (TREMBlrel. 15, Created)
DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE IGF1 protein precursor.
GN IGF1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.

Matches 106; Conservative 1; Mismatches 3; Indels 1; Gaps 1;

RX MEDLINE=88065102; PubMed=3693205;
RA Rall L.B., Scott J., Bell G.I.;
RT "Human insulin-like growth factor I and II messenger RNA: isolation of
RT complementary DNA and analysis of expression."
RL Meth. Enzymol. 146:239-248 (1987).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DB EMBL; M29644; AA052543.1; -.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; P:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF.1.
DR PROSITE; PS00262; INSULIN; 1.
DR SIGNAL.
KW SIGNAL.
FT CHAIN 1 25 POTENTIAL.
SQ SEQUENCE 130 AA; 14406 MW; 970PBAACFA0352D CRC64;

Query Match 77.2%; Score 465; DB 4; Length 130;
Best Local Similarity 98.8%; Pred. No. 6.8e-48;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPOTGIVDECCFRSCDLRLLEY 60
DB 26 GPEITCGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPOTGIVDECCFRSCDLRLLEY 85
QY 61 CAPLKPAAKARSVRAQHTDMPKTK 86
DB 86 CAPLKPAAKARSVRAQHTDMPKTK 111

RESULT 4
Q14620 PRELIMINARY; PRT; 137 AA.
AC 014620;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor I precursor.
GN IGF1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC MEDLINE=9187000; PubMed=2082190;
RA Tobin G., Yee D., Brunner N., Rotwein P.;
RT "A novel human insulin-like growth factor I messenger RNA is expressed
RT in normal and tumor cells."
RL Mol. Endocrinol. 4:1914-1920 (1990).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DB EMBL; M37484; AA052789.1; -.
DR FTR; A36552; A36552.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; P:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF.1.
DR PROSITE; PS00262; INSULIN; 1.
DR SIGNAL.
KW SIGNAL.
FT CHAIN 1 32 POTENTIAL.
SQ SEQUENCE 137 AA; 15177 MW; BFCCDD1B532AB75D CRC64;

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Query Match 77.2%; Score 465; DB 4; Length 137;
 Best Local Similarity 98.8%; Pred. No. 7, 2e-48;
 Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEY 60
 DB 33 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEY 92

QY 61 CAPLKPAAARSVAORHTDMPKTK 86
 DB 93 CAPLKPAAARSVAORHTDMPKTK 118

RESULT 5
 ID P79167 PRELIMINARY; PRT; 139 AA.
 AC P79167;
 DT 01-MAY-1997 (TREMBLrel. 03, Created)
 DT 01-OCT-2000 (TREMBLrel. 15, Last sequence update)
 DT 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C) (Fragments).
 DE IGF1.
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
 NCBI_TaxID=9796;
 RN (1)
 RP SEQUENCE OF 1-122 FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=97013467; PubMed=8860303;
 RA Cote K, Rozell B, Gessbo A, Engstrom M;
 RT "Cloning and sequencing of an equine insulin-like growth factor I cDNA and its expression in fetal and adult tissues.";
 RL Gen. Comp. Endocrinol. 102:11-15(1996).
 RN (2)
 RP SEQUENCE OF 123-139 FROM N.A.
 RA Nixon A.J., Toland B.D., Sandell L.J.;
 RL Submitted (JAN-1997) to the EMBL/GenBank/DBJ databases.
 CC -1- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -1- SUBCELLULAR LOCATION: SECRETED.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P79167-1; Sequence=Displayed;
 CC Name=IGF-IA;
 CC IsoId=PS1458-1; Sequence=External;
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; U28070; AAA68952.1; -;
 DR EMBL; U85271; AAB47484.1; -;
 DR HSSP; P01343; 2GFI.
 DR GO; GO:000576; C:extracellular; IEA.
 DR GO; GO:0008083; F:growth factor activity; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Signal; Alternative splicing.
 FT SIGNAL 1
 FT PROPEP 2
 FT CHAIN 48 BY SIMILARITY.
 FT DOMAIN 49 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 77 E.
 FT DOMAIN 78 C.
 FT DOMAIN 89 A.
 FT DOMAIN 90 A.
 FT DOMAIN 110 A.
 FT DOMAIN 111 A.
 FT DOMAIN 118 D.
 FT PROPEP 119 E PEPTIDE.
 FT NON CONS 122
 FT DISUFID 54
 FT DISUFID 96 BY SIMILARITY.
 FT DISUFID 109 BY SIMILARITY.

FT DISUFID 95 100 BY SIMILARITY.
 FT NON TER 139
 SQ SEQUENCE 139 AA; 15612 MW; CDC08F19C61A2C CRC64;

Query Match 76.7%; Score 462; DB 6; Length 139;
 Best Local Similarity 85.4%; Pred. No. 1, 7e-47;
 Matches 88; Conservative 1; Mismatches 2; Indels 12; Gaps 1;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEY 60
 DB 49 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEY 108

QY 61 CAPLKPAAARSVAORHTDMPKTK 103
 DB 109 CAPLKPAAARSVAORHTDMPKTK 139

RESULT 6
 ID Q9N1C1 PRELIMINARY; PRT; 133 AA.
 AC Q9N1C1;
 DT 01-OCT-2000 (TREMBLrel. 15, Created)
 DT 01-OCT-2000 (TREMBLrel. 15, Last sequence update)
 DT 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
 DE Insulin-like growth factor I (Fragment).
 DE IGF1.
 OS Bos taurus (Bovine).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidea; Bovidae; Bovinae; Bos.
 NCBI_TaxID=9913;
 RN (1)
 RP SEQUENCE FROM N.A.
 RA Lien S., Karlsson A., Klemetsdal G., Vage D.I., Olsaker I., Klungland H., Aastad M., Heringstad B., Ruane J., Gomez-Raya L.;
 RT "A primary screen of the bovine genome for quantitative trait loci affecting twinning rate.";
 RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
 CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; AF210385; AAF72409.1; JOINED.
 DR EMBL; AF210386; AAF72409.1; JOINED.
 DR HSSP; P01343; 2GFI.
 DR GO; GO:000576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 FT NON TER 1
 FT SEQUENCE 133 AA; 14674 MW; A6991DBC75C103B CRC64;

Query Match 76.4%; Score 460; DB 6; Length 133;
 Best Local Similarity 97.7%; Pred. No. 2, 8e-47;
 Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEY 60
 DB 29 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEY 88

QY 61 CAPLKPAAARSVAORHTDMPKTK 86
 DB 89 CAPLKPAAARSVAORHTDMPKTK 114

RESULT 7
 ID Q8CAU6 PRELIMINARY; PRT; 153 AA.
 AC Q8CAU6;
 DT 01-MAR-2003 (TREMBLrel. 23, Created)

DT 01-MAR-2003 (Tremblrel. 23, last sequence update)
 DT 01-OCT-2003 (Tremblrel. 25, last annotation update)
 DE UNKNOWN EST.
 GN C730016P09RIK.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 CX NCBI_Taxid=1090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=C57BL/6J; TISSUE=Cerebellum;
 RX MEDLINE=22354683; PubMed=12466851;
 RA The FANTOM Consortium,
 RA "The RIKEN Genome Exploration Research Group Phase I & II Team;
 RT "Analysis of the mouse transcriptome based on functional annotation of
 RT 60,770 full-length cDNAs."
 RL Nature 420:563-573(2002).
 DR EMBL; AK081019; BAC38117.1;
 DR MGD; MGI:2444166; C730016P09RIK.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin.1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF.1.
 DR PROSITE; PS00262; INSULIN.1.
 SQ SEQUENCE 153 AA; 17093 MW; 967596AECAC387 CRC64;
 Query Match 74.8%; Score 450; DB 11; Length 153;
 Best Local Similarity 95.3%; Pred. No. 5.2e-46;
 Matches 82; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
 QY 1 GPEITLCAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 60
 DB 49 GPEITLCAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 108
 QY 61 CAPLKPAKARSVRAQRHTDMPKTK 86
 DB 109 CAPLKPAKARSVRAQRHTDMPKTK 134
 RESULT 8
 P97899 PRELIMINARY; PRT; 127 AA.
 AC P97899;
 DT 01-MAY-1997 (Tremblrel. 03, Created)
 DT 01-MAY-1997 (Tremblrel. 03, last sequence update)
 DT 01-JUN-2003 (Tremblrel. 24, last annotation update)
 DE Insulin-like growth factor I.
 OS Rattus sp.
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 CX NCBI_Taxid=10118;
 RN [1]
 RP PARTIAL SEQUENCE FROM N.A.
 RC MEDLINE=87222423; PubMed=3034909;
 RA Shimatsu A., Rotwein P.;
 RT "Mosaic evolution of the insulin-like growth factors."
 RL J. Biol. Chem. 262:7894-7900(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC MEDLINE=91103966; PubMed=1368571;
 RA Kato H., Okoshi A., Mura Y., Noguchi T.;
 RT "A new cDNA clone relating to larger molecular species of rat insulin-
 RT like growth factor-I mRNA."
 RL Agric Biol Chem 54:1599-1601(1990).
 CC -1- SUBCELLULAR LOCATION: SECRETED (By SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; D00698; BAA00604.1; -.
 DR HSSP; P01343; ZGFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin.1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF.1.
 DR PROSITE; PS00262; INSULIN.1.
 FX SIGNAL.
 FT CHAIN 1 48 POTENTIAL.
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR-I.
 SQ SEQUENCE 153 AA; 17295 MW; 5AF15BBD13C70B5 CRC64;
 Query Match 69.6%; Score 419; DB 13; Length 153;
 Best Local Similarity 88.4%; Pred. No. 2.7e-42;
 Matches 76; Conservative 4; Mismatches 6; Indels 0; Gaps 0;
 QY 1 GPEITLCAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 60
 DB 49 GPEITLCAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 108
 QY 61 CAPLKPAKARSVRAQRHTDMPKTK 86
 DB 109 CAPLKPAKARSVRAQRHTDMPKTK 134
 RESULT 10
 Q91230

DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin.1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF.1.
 DR PROSITE; PS00262; INSULIN.1.
 FT CHAIN 23 92 POTENTIAL.
 SQ SEQUENCE 127 AA; 14106 MW; 104E126BCFCA5CB7 CRC64;
 Query Match 74.3%; Score 447; DB 11; Length 127;
 Best Local Similarity 94.2%; Pred. No. 9.6e-45;
 Matches 81; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
 QY 1 GPEITLCAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 60
 DB 23 GPEITLCAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 82
 QY 61 CAPLKPAKARSVRAQRHTDMPKTK 86
 DB 63 CAPLKPAKARSVRAQRHTDMPKTK 108

RESULT 9
 Q93380 PRELIMINARY; PRT; 153 AA.
 AC Q93380;
 DT 01-NOV-1998 (Tremblrel. 08, Created)
 DT 01-NOV-1998 (Tremblrel. 08, last sequence update)
 DT 01-JUN-2003 (Tremblrel. 24, last annotation update)
 DE Insulin-like growth factor-I precursor.
 GN IGFI.
 OS Meleagris gallopavo (Common turkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Meleagris.
 CX NCBI_Taxid=9103;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Big 6 ML Tom; TISSUE=Liver;
 RA Czerwinski S.M., Ashwell C.M., McMurry J.P.;
 RT "Cloning of turkey insulin-like growth factor-I (IGF-I)."
 RT Submitted (JUN-1998) to the EMBL/GenBank/DBJ databases.
 CC -1- SUBCELLULAR LOCATION: SECRETED (By SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; AF074980; AAC26006.1; -.
 DR HSSP; P01343; ZGFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin.1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF.1.
 DR PROSITE; PS00262; INSULIN.1.
 FX SIGNAL.
 FT CHAIN 1 48 POTENTIAL.
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR-I.
 SQ SEQUENCE 153 AA; 17295 MW; 5AF15BBD13C70B5 CRC64;
 Query Match 69.6%; Score 419; DB 13; Length 153;
 Best Local Similarity 88.4%; Pred. No. 2.7e-42;
 Matches 76; Conservative 4; Mismatches 6; Indels 0; Gaps 0;
 QY 1 GPEITLCAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 60
 DB 49 GPEITLCAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDRLRLMY 108
 QY 61 CAPLKPAKARSVRAQRHTDMPKTK 86
 DB 109 CAPLKPAKARSVRAQRHTDMPKTK 134

ID 091230 PRELIMINARY; PRT: 161 AA.

AC 091230; 01-NOV-1996 (TREMBlrel. 01, Created)

DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)

DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)

DE Insulin-like growth factor-I.

GN IGF-I.

OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Proactinopterygii; Salmoniformes; Salmonidae; Oncorhynchus.

OC NCBI_TaxID=74940;

RN [1]

RP SEQUENCE FROM N.A.

RC STRAIN=Big Qualicum River; TISSUE=Liver;

RX MEDLINE=93247592; PubMed=7683374;

RA Wallis A.E., Devlin R.H.,

RT "Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways."

RL Mol. Endocrinol. 7:409-422(1993).

RN [2]

RP SEQUENCE FROM N.A.

RC STRAIN=Big Qualicum River; TISSUE=Liver;

RA Devlin R.H.,

RL Submitted (OCT-1994) to the EMBL/GenBank/DBJ databases.

CC -1- SUBCELLULAR LOCATION: SECRETED (By Similarity).

CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; U15961; AAA67267.1; -.

DR PIR; C54270; C54270.

DR HSSP; P01343; 2GFI.

DR GO; GO:0005576; C:extracellular; IEA.

DR GO; GO:0005179; P:hormone activity; IEA.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PRO0277; INSULINB.

DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.

SO SEQUENCE 161 AA; 17763 MW; A5A85D121377BF67 CRC64;

Query Match 67.1%; Score 404; DB 13; Length 161;
Best Local Similarity 69.4%; Pred. No. 1,8e-40;
Matches 77; Conservative 13; Mismatches 15; Indels 6; Gaps 2;

QY 1 GPEITCGALVDALQFVCGDGRGFYFNKPTGYGSSSRAPDTGIVDECCFSCDLRLIEWY 60
DB 45 GPEITCGALVDLTQFVCGDGRGFYFNKPTGYGSSSRSHNRGIVDECCFSCDLRLIEWY 104
CY 61 CAPLPAPAAARSVRQRTDMPKTKYQPPSTN-----KKMKSGRRRKSGT 106
DB 105 CAPVKSGRKAARSVRQRTDMPKTKYQPPSTN-----KKMKSGRRRKSGT 154

RESULT 11

Q91B10 PRELIMINARY; PRT: 178 AA.

AC 091B10; 01-OCT-2000 (TREMBlrel. 15, Created)

DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)

DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)

DE Insulin-like growth factor I subtype Eaz.

GN IGF-1Eaz OR IGF-1.

OS Cyprinus carpio (Common carp).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Cyprinus.

OC NCBI_TaxID=7962;

RN [1]

RP SEQUENCE FROM N.A.

RC TISSUE=Liver;

RX MEDLINE=96241923; PubMed=8680527;

RA Liang Y.H., Cheng C.H., Chan K.M.,

RT "Insulin-like growth factor Iba2 is the predominantly expressed form

RT of IGF in common carp (Cyprinus carpio).";
Mol. Mar. Biol. Biotechnol. 5:145-152(1996).

RN [2]

RP SEQUENCE FROM N.A.

RA Vong Q.P., Chan K.M., Cheng C.H.K.,

RT "Common carp insulin-like growth factor-I gene: Genomic organization and functional characterization of the 5'-flanking region."

RL Submitted (JUN-2002) to the EMBL/GenBank/DBJ databases.

CC -1- SUBCELLULAR LOCATION: SECRETED (By Similarity).

CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; S82374; AAB37702.2; -.

DR EMBL; AF465830; AAF78926.1; -.

DR HSSP; P01343; 2GFI.

DR GO; GO:0005576; C:extracellular; IEA.

DR GO; GO:0005179; P:hormone activity; IEA.

DR GO; GO:0007582; P:physiological processes; IEA.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PRO0277; INSULINB.

DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.

SO SEQUENCE 178 AA; 19687 MW; 7075A34FF379C459 CRC64;

Query Match 66.9%; Score 403; DB 13; Length 178;
Best Local Similarity 68.2%; Pred. No. 2.7e-40;
Matches 75; Conservative 12; Mismatches 19; Indels 4; Gaps 1;

QY 1 GPEITCGALVDALQFVCGDGRGFYFNKPTGYGSSSRAPDTGIVDECCFSCDLRLIEWY 60
DB 62 GPEITCGALVDLTQFVCGDGRGFYFNKPTGYGSSSRSHNRGIVDECCFSCDLRLIEWY 121
QY 61 CAPLPAPAAARSVRQRTDMPKTKYQPPSTN-----STTKKKSGRRRKSGT 106
DB 122 CAPVKSGRKAARSVRQRTDMPKTKYQPPSTN-----STTKKKSGRRRKSGT 171

RESULT 12

Q91475 PRELIMINARY; PRT: 145 AA.

AC 091475; 01-NOV-1996 (TREMBlrel. 01, Created)

DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)

DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)

DE Insulin-like growth factor I precursor (Fragment).

OS Salmo salar (Atlantic salmon).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Proactinopterygii; Salmoniformes; Salmonidae; Salmo.

OC NCBI_TaxID=8030;

RN [1]

RP SEQUENCE FROM N.A.

RC TISSUE=Liver;

RX MEDLINE=93024477; PubMed=1406698;

RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.,

RT "Nucleotide sequence and tissue distribution of three insulin-like growth factor I prohormones in salmon."

RL Submitted (JUN-1992) to the EMBL/GenBank/DBJ databases.

CC -1- SUBCELLULAR LOCATION: SECRETED (By Similarity).

CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; M81904; AAL18211.1; -.

DR HSSP; P01343; 2GFI.

DR GO; GO:0005576; C:extracellular; IEA.

DR GO; GO:0005179; P:hormone activity; IEA.

DR GO; GO:0007582; P:physiological processes; IEA.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PRO0277; INSULINB.

DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.

DR SIGNAL.

FT NON TER

FT SIGNAL

FT CHAIN

1 1 POTENTIAL.

<1 18 INSULIN-LIKE GROWTH FACTOR I.

19 >88

FT	NON TER	145	145	3D4EDF477268FC4	CR664
50	SEQUENCE	145 AA;	15885 MW;		
	Query Match	66.8%;	Score 402;	DB 13;	Length 145;
	Best Local Similarity	73.3%;	Pred. No. 2.8e-40;		
	Matches 74;	Conservative	9;	Mismatches 18;	Indels 0;
					Gaps 0;
Oy	1	GPETTCGALVDTLQVCGCDRGFYFNKRTGYGSSSRAPAPOTGIYDECCECRSDLRILEMY	60		
Db	19	GPETTCGALVDTLQVCGCDRGFYFNKRTGYGSSSRAPAPOTGIYDECCECRSDLRILEMY	78		
Oy	61	CAPLKPAKARSVRAQRHTDMKTKCYKCPSPSTKMKMSQR	101		
Db	79	CAPVKSQKARSVRAQRHTDMKTKCYKCPSPSTKMKMSQR	119		
	RESULT 13				
	091162				
	ID	PRELIMINARY;	PRT;	155 AA.	
AC	091162;				
DT	01-NOV-1996 (TrEMBLrel. 01, Created)				
DT	01-NOV-1996 (TrEMBLrel. 01, Last sequence update)				
DT	01-JUN-2003 (TrEMBLrel. 24, Last annotation update)				
DE	Insulin-like growth factor I precursor (Fragment).				
OS	Oncorhynchus kisutch (Coho salmon).				
OC	Actinopterygii; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;				
OC	Actinopterygii; Neopterygii; Teleostei; Euteleostei;				
OC	Proteanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.				
OK	NCBI_Taxid=6019;				
RN	(1)				
RP	SEQUENCE FROM N.A.				
RC	TISSUE=Liver;				
RC	MEDLINE=9010659; PubMed=2628735;				
RX	Cao Q.P., Duguay S.J., Pilsetskaya B., Steiner D.F., Chan S.J.;				
RA	"Nucleotide sequence and growth hormone regulated expression of salmon				
RT	insulin-like growth factor I mRNA."				
RL	MoJ. Endocrinol. 3:2005-2010(1989).				
RN	(2)				
RP	SEQUENCE FROM N.A.				
RC	TISSUE=Liver;				
RC	MEDLINE=93024477; PubMed=1406698;				
RX	Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;				
RA	"Nucleotide sequence and tissue distribution of three insulin-like				
RT	growth factor I prohormones in salmon."				
RL	MoJ. Endocrinol. 6:1202-1210(1992).				
CC	-1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).				
CC	-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.				
CC	EMBL; M81912; AAA49413.1; -.				
DR	PIR; C44012; C44012.				
DR	HSSP; P01343; ZGFI.				
DR	GO; GO:0005576; Celectracellular; IEA.				
DR	GO; GO:0005179; F.hormone activity; IEA.				
DR	GO; GO:0007582; P.physiological processes; IEA.				
DR	InterPro; IPR004825; Ins/IGF/relax.				
DR	InterPro; IPR00493; Insulin; 1.				
DR	PRINTS; PRO0277; INSULINB.				
DR	SMART; SMO0078; IIGF; 1.				
DR	PROSITE; PS00262; INSULIN; 1.				
KM	Signal.				
FT	NON TER	1	1		
FT	SIGNAL	<1	18	POTENTIAL.	
FT	CHAIN	19	>88	INSULIN-LIKE GROWTH FACTOR I.	
FT	CONFLICT	73	73	R -> X (IN REF. 1).	
FT	NON_TER	155	155		
SQ	SEQUENCE	155 AA;	16968 MW;	022FDD3CA39CA3160	CR664;
	Query Match	66.8%;	Score 402;	DB 13;	Length 155;
	Best Local Similarity	73.3%;	Pred. No. 3.1e-40;		
	Matches 74;	Conservative	9;	Mismatches 18;	Indels 0;
					Gaps 0;
Oy	1	GPETTCGALVDTLQVCGCDRGFYFNKRTGYGSSSRAPAPOTGIYDECCECRSDLRILEMY	60		
Db	19	GPETTCGALVDTLQVCGCDRGFYFNKRTGYGSSSRAPAPOTGIYDECCECRSDLRILEMY	78		
Oy	19	GPETTCGALVDTLQVCGCDRGFYFNKRTGYGSSSRAPAPOTGIYDECCECRSDLRILEMY	78		

[illegible]

Q91965
ID Q91965 PRELIMINARY; PRT; 188 AA.
AC Q91965;
DT 01-NOV-1996 (TrEMBLrel. 01, Created)
DT 01-NOV-1996 (TrEMBLrel. 01, last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, last annotation update)
DE Insulin-like growth factor-I.
GN IGF-I.
OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=74940;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=93247592; PubMed=7683374;
RA Wallis A.E.; Devlin R.H.;
RT "Duplicate insulin-like growth factor-I genes in salmon display
RT alternative splicing pathways."
RL Mol. Endocrinol. 7:409-422(1993).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RA Devlin R.H.;
RL Submitted (OCT-1994) to the EMBL/GenBank/DBJ databases.
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RA Devlin R.H.;
RL Submitted (SEP-1994) to the EMBL/GenBank/DBJ databases.
CC -|- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
CC -|- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
DR EMBL: U15960; AAA67266.1; -;
DR EMBL: U15366; AAA67263.1; -;
DR PIR: A54270; A54270.
DR PIR: B54270; B54270.
DR HSSP: P01343; 2GFI.
DR GO: GO:0005576; C:extracellular; IEA.
DR GO: GO:0005179; F:hormone activity; IEA.
DR GO: GO:0007582; F:physiological processes; IEA.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS: PR00277; INSULIN.
DR SMART: SM00078; IGF; 1.
DR PROSITE: PS00262; INSULIN; 1.
SQ SEQUENCE 188 AA; 20782 MW; F4D705EA811024B8 CRC64;

Query Match 66.8%; Score 402; DB 13; Length 188;

Best Local Similarity 73.3%; Pred. No. 3.8e-40; Mismatches 18; Indels 0; Gaps 0;

QY 1 GPETLGAELVDALGVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLQMY 60
DB 45 GPETLGAELVDLGVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLQMY 104
QY 61 CAPLPKAKARSVRAQRHTDMPYTKYQPPSTNKKKQSR 101
DB 105 CAPVKSQKARSVRAQRHTDMPYTKYQPPSTNKKKQSR 145

Search completed: March 3, 2004, 07:55:28
Job time : 33.4337 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 3, 2004, 07:50:54 ; Search time 8.0241 Seconds
(without alignments)
720.304 Million cell updates/sec

Title: US-09-852-261-6
Perfect score: 602

Sequence: 1 GPELIGALVDAIQVCGD.....TNKMKSGRRKRGSTPEHK 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database: SwissProt_42:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Length	DB ID	Description
1	602	100.0	143 1	IGF1_RABIT
2	539	89.5	133 1	IGFB_MOUSE
3	536	89.0	195 1	IGFB_HUMAN
4	508	84.4	181 1	IGFB_RAT
5	465	77.2	130 1	IGF1_CAVPO
6	465	77.2	153 1	IGFA_HUMAN
7	460	76.4	122 1	IGF1_CANFA
8	460	76.4	153 1	IGF1_PIG
9	460	76.4	154 1	IGF1_BOVIN
10	456	75.7	154 1	IGF1_CAPI
11	452	75.1	154 1	IGF1_SHEEP
12	450	74.8	127 1	IGFA_MOUSE
13	447	74.3	153 1	IGFA_RAT
14	419	69.6	124 1	IGF1_CHICK
15	419	69.6	153 1	IGF1_COTUA
16	417	69.3	81 1	IGF1_GUNMU
17	412.5	68.5	153 1	IGF1_XENLA
18	403	66.9	161 1	IGFB_XENLA
19	402	66.8	176 1	IGFB_CYPCA
20	400	66.4	122 1	IGF1_ONCKI
21	398	66.1	176 1	IGF1_HORSE
22	393	65.3	161 1	IGF1_ONCMY
23	393	65.3	161 1	IGFA_CYPCA
24	272	45.2	214 1	IGF2_ONCMY
25	242	40.2	179 1	IGF2_SHEEP
26	236	39.2	155 1	IGF2_BOVIN
27	232	38.5	180 1	IGF2_HUMAN
28	231	38.4	128 1	IGF2_CAVPO
29	229	38.0	139 1	IGF2_MOUSE
30	229	38.0	181 1	IGF2_HORSE
31	229	38.0	181 1	IGF2_PIG
32	227	37.7	180 1	IGF2_MOUSE
33	224.5	37.3	180 1	IGF2_RAT

34	219	36.4	66 1	IGF2_CHICK	P33717	gallus gall
35	159.5	26.5	50 1	INS_MYOC	P07453	myocephal
36	158.5	26.3	50 1	INS_GADCA	P01336	gadus calia
37	155.5	25.8	51 1	INS2_BATSP	P01337	batrachoid
38	154	25.6	50 1	INS2_BATSP	P01338	batrachoid
39	151	25.1	59 1	INS_HYDCO	P09536	hyrolagus
40	149	24.8	51 1	INS_CHIBR	P01337	chinchilla
41	149	24.8	51 1	INS_ZAODH	P12708	zaocys dhun
42	148	24.6	51 1	INS_ALMT	P12703	alligator m
43	146.5	24.3	51 1	INS2_THUTH	P01339	thunus thy
44	146	24.3	51 1	INS_ANSAN	P07454	anser anser
45	146	24.3	51 1	INS_CROAT	P01334	crocalus at

ALIGNMENTS

RESULT 1
ID IGF1_RABIT STANDARD; PRT; 143 AA.
AC Q95222; O18846;
DT 01-NOV-1997 (Rel. 35, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (somatomedin).
GN IGF1 OR IGF-1.
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORM IGF-1A).
RC STRAIN=ZIKa; Mueller M.;
RA Flehna G., Brem G., Mueller M.;
RL Submitted (NOV-1996) to the EMBL/GenBank/DBJ databases.
RP SEQUENCE FROM N.A. (ISOFORM IGF-1B).
RC STRAIN=ZIKa; TISSUE=Liver;
RA Flehna G., Brem G., Mueller M.;
RL Submitted (SEP-1997) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- ALTERNATIVE PRODUCTS:
CC Event-Alternative splicing; Named isoforms=2;
CC Name=IGF-1B;
CC isoId=Q95222-1; Sequence=Displayed;
CC Name=IGF-1A;
CC isoId=Q95222-2; Sequence=VSP_002705;
CC -1- SIMILARITY: Belongs to the insulin family.
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL Outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See <http://www.ebi.ac.uk/announcements> or send an email to license@ebi.ac.uk).
CC EMBL: U75390; AAB8032.1; -
CC EMBL: AF022961; AAB80950.1; -
CC HSSP: P01343; IGF1.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin_1.
DR PRINTS: PR00277; INSULINB.
DR SMART: SM00078; IIGF_1.
DR PROSITE: PS00622; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
FT SIGNAL 1 32
FT CHAIN 33 102 POTENTIAL.
FT PROPEP 103 143 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 33 61 E PEPTIDE.
FT

FT DOMAIN 62 73 C.
 FT DOMAIN 74 94 A.
 FT DOMAIN 95 102 D.
 FT DISULFID 38 80 BY SIMILARITY.
 FT DISULFID 50 93 BY SIMILARITY.
 FT DISULFID 79 84 BY SIMILARITY.
 FT VARSPLIC 119 143 YOPSTNNKMSQRRKSGTPEERK -> EYHLMNTRGSGA
 FT /FTID=VSP 002705.
 FT /FTID=VSP 002705.
 SQ SEQUENCE 143 AA; 16091 MW; 819AF57800A1B1A CMC64;
 Query Match 100.0%; Score 602; DB 1; Length 143;
 Best Local Similarity 100.0%; Pred. No. 2,7e-56;
 Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDGFYFNKPTGYGSSRRAPOTGIYDECCFSCDLRLIEMV 60
 DB 33 GPEITCGAELVDALQFVCGDGFYFNKPTGYGSSRRAPOTGIYDECCFSCDLRLIEMV 92
 QY 61 CAPLKPAAKARSVRAQRHTDMPKTKYQPPSTNNKMSQRRKSGTPEERK 111
 DB 93 CAPLKPAAKARSVRAQRHTDMPKTKYQPPSTNNKMSQRRKSGTPEERK 143

RESULT 2
 ID IGFB_MOUSE STANDARD; PRT; 133 AA.
 AC P05018;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 15-MAR-2004 (Rel. 43, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
 GN IGF1 OR IGF-1
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_Taxid:10090;
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=87040760; PubMed=3774549;
 RT Bell G.T., Stempien M.M., Fong N.M., Rall L.B.;
 RT "Sequences of liver cDNAs encoding two different mouse insulin-like
 RT growth factor I precursors.";
 RT Nucleic Acids Res. 14:7873-7882(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=FVB/N; TISSUE=Liver;
 RX MEDLINE=22388257; PubMed=12477932;
 RA Klausner R.D., Collins F.S., Wagner L., Shemen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhac N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heisen F.,
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stachek M., Soares M.B., Bonaldi M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Ueda T.B., Toshnyk S., Carrinchi P., Prange C.,
 RA Raha S.S., Locuallano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
 RA Bosak S.A., McMan P.J., McKernan K.J., Malek J.A., Guneratne P.H.,
 RA Richardson S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,
 RA Villalón D.K., Wuzny D.M., Sodergren E., Du X., Gibbs R.A.,
 RA Fahy J., Helton B., Kettman M., Madan A., Rodriguez S., Sanchez A.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Small D.E.,
 RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length
 RT human and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.

CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P05018-1; Sequence=Displayed;
 CC Name=IGF-1A;
 CC IsoId=P05017-1; Sequence=External;
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC or send an email to license@isb-sib.ch).

DR EMBL; X04482; CAA28170.1; -;
 DR EMBL; BC012409; AAH12409.1; -;
 DR HSSP; P01343; IGF1.
 DR MGD; MGI:96432; IGF1.
 DR GO; GO:0010001; P:glial cell differentiation; IMP.
 DR GO; GO:0007399; P:neurogenesis; IMP.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR02277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 DR Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 KM SIGNAL 1 22
 FT CHAIN 23 92 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 23 51 B.
 FT DOMAIN 52 63 C.
 FT DOMAIN 64 84 A.
 FT DOMAIN 85 92 D.
 FT PROPEP 93 133 E.PEPTIDE.
 FT DISULFID 28 70 BY SIMILARITY.
 FT DISULFID 40 83 BY SIMILARITY.
 FT DISULFID 69 74 BY SIMILARITY.
 SQ SEQUENCE 133 AA; 14915 MW; BBE5C0588D62502 CRC64;

Query Match 89.5%; Score 539; DB 1; Length 133;
 Best Local Similarity 91.0%; Pred. No. 1e-49;
 Matches 101; Conservative 1; Mismatches 9; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDGFYFNKPTGYGSSRRAPOTGIYDECCFSCDLRLIEMV 60
 DB 23 GPEITCGAELVDALQFVCGDGFYFNKPTGYGSSRRAPOTGIYDECCFSCDLRLIEMV 82
 QY 61 CAPLKPAAKARSVRAQRHTDMPKTKYQPPSTNNKMSQRRKSGTPEERK 111
 DB 83 CAPLKPAAKARSVRAQRHTDMPKTKYQPPSTNNKMSQRRKSGTPEERK 133

RESULT 3
 ID IGFB_HUMAN STANDARD; PRT; 195 AA.
 AC P05019;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C).
 GN IGF1 OR IGF1.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 OX NCBI_Taxid:9606;
 RP SEQUENCE FROM N.A.
 RC MEDLINE=86168194; PubMed=2937782;
 RX Kottwein P., Pollock K.M., Didier D.K., Krivi G.G.;
 RA "Organization and sequence of the human insulin-like growth factor I
 RA gene. Alternative RNA processing produces two insulin-like growth
 RT factor I precursor peptides.";

RL J. Biol. Chem. 261:4828-4832(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86094355; PubMed=3455760;
 RA Rotwein P.;
 RT "Two insulin-like growth factor I messenger RNAs are expressed in human liver.";
 RL Proc. Natl. Acad. Sci. U.S.A. 83:77-81(1986).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=6108862; PubMed=3002851;
 RA de Pagter-Holthuisen P., van Schaik F.M.A., Verduijn G.M., van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
 RT "Organization of the human genes for insulin-like growth factors I and II.";
 RL FEBS Lett. 195:179-184(1986).
 RN [4]
 RP SEQUENCE OF 22-50 FROM N.A.
 RX MEDLINE=84295593; PubMed=6382022;
 RA Dull T.J., Gray A., Hayflick U.S., Ulrich A.;
 RT "Insulin-like growth factor II precursor gene organization in relation to insulin gene family.";
 RL Nature 310:777-781(1984).
 RN [5]
 RP SEQUENCE OF 49-118.
 RX MEDLINE=8130171; PubMed=632300;
 RA Rinderknecht E., Hummel R.E.;
 RT "The amino acid sequence of human insulin-like growth factor I and its structural homology with prolinsulin.";
 RL J. Biol. Chem. 253:2769-2776(1978).
 RN [6]
 RP 3D-STRUCTURE MODELING.
 RX MEDLINE=83210259; PubMed=6189745;
 RA Blundell T.L., Bedaride S., Hummel R.E.;
 RT "Tertiary structures, receptor binding, and antigenicity of insulin-like growth factors.";
 RL Fed. Proc. 42:2592-2597(1983).
 RN [7]
 RP STRUCTURE BY NMR.
 RX MEDLINE=91242464; PubMed=2036417;
 RA Cooke R.M., Harvey T.S., Campbell I.D.;
 RT "Solution structure of human insulin-like growth factor I: a nuclear magnetic resonance and restrained molecular dynamics study.";
 RL Biochemistry 30:5484-5491(1991).
 RN [8]
 RP STRUCTURE BY NMR.
 RX MEDLINE=92316903; PubMed=1319992;
 RA Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M., Yasuda T., Kobayashi Y.;
 RT "1H-NMR assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution.";
 RL J. Biochem. 111:529-536(1992).
 RN [9]
 RP DISULFIDE BONDS.
 RX MEDLINE=89207850; PubMed=3242681;
 RA Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
 RT "Location of disulphide bonds in human insulin-like growth factors (IGFs) synthesized by recombinant DNA technology.";
 RL Biomed. Environ. Mass Spectrom. 16:3-8(1988).
 RN [10]
 RP VARIANT ASP-187.
 RX MEDLINE=99318093; PubMed=10391209;
 RA Cargill M., Alshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipschutz R., Daley G.Q.;
 RT "Characterization of single-nucleotide polymorphisms in coding regions of human genes.";
 RL Nat. Genet. 22:231-238(1999).
 RN [11]
 RP ERRATUM.
 RA Cargill M., Alshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.,

RA Friedland L., Rolfe A., Warrington J., Lipschutz R., Daley G.Q.,
 RL Lander E.S.; 23:373-373(1999).
 RN Nat. Genet. 23:373-373(1999).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P05019-1; Sequence=Displayed;
 CC Name=IGF-IA;
 CC IsoId=P01343-1; Sequence=External;
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC -----
 DR EMBL; M14155; AAAS2537.1; -;
 DR EMBL; M12659; AAAS2537.1; JOINED.
 DR EMBL; M14153; AAAS2537.1; JOINED.
 DR EMBL; M14154; AAAS2537.1; JOINED.
 DR EMBL; M1568; AAAS2539.1; -;
 DR EMBL; X03563; CAA27250.1; ALT_SEQ.
 DR EMBL; X03420; CAA27152.1; -;
 DR EMBL; X03421; CAA27153.1; -;
 DR EMBL; X03422; CAA27154.1; -;
 DR PIR; A01611; IGHU1B.
 DR PDB; 1GFI; 15-OCT-94.
 DR PDB; 2GFI; 15-APR-93.
 DR PDB; 3GFI; 15-APR-93.
 DR PDB; 1BGT; 18-MAY-99.
 DR Genew; HGNC:5464; IGF1.
 DR MIM; 147440; -;
 DR MIM; 265850; -;
 DR GO; GO:0005159; F:Insulin-like growth factor receptor binding; TAS.
 DR GO; GO:0005180; F:Peptide hormone; TAS.
 DR GO; GO:0006928; P:Cell motility; TAS.
 DR GO; GO:0006260; P:DNA replication; TAS.
 DR GO; GO:0009441; P:Glucose metabolism; TAS.
 DR GO; GO:0007517; P:Muscle development; TAS.
 DR GO; GO:0008284; P:Positive regulation of cell proliferation; TAS.
 DR GO; GO:0007265; P:RAS protein signal transduction; TAS.
 DR GO; GO:0007165; P:Signal transduction; TAS.
 DR GO; GO:0001801; P:Skeletal development; TAS.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SMC0078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; 3D-structure; Plasma; Alternative splicing; Signal; Polymorphism; POTENTIAL.
 FT SIGNAL 1 21
 FT PROPEP 22 48
 FT CHAIN 49 118
 FT DOMAIN 49 77
 FT DOMAIN 78 89
 FT DOMAIN 90 110
 FT DOMAIN 111 118
 FT PROPEP 119 195
 FT DISULFID 54 96
 FT DISULFID 66 109
 FT DISULFID 95 100
 FT VARIANT 187 187
 FT STRAND 51 51
 FT TURN 55 55
 FT HELIX 56 69
 A -> D (in dbSNP:6223).
 /FTid=VAR_013945.

FT TURN 87 88
 FT HELIX 91 95
 FT TURN 96 97
 FT STRAND 99 99
 FT HELIX 106 109
 SQ SEQUENCE 195 AA; 21841 MW; E88A8CFBD1CD1873 CRC64;

Query Match
 Best Local Similarity 89.0%; Score 536; DB 1; Length 195;
 Matches 98; Conservativity 2; Mismatches 2; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFCVGDGRGFYFNKPTGYGSSRRAPQGTGIVDECCFRSCDLRLLEY 60
 DB 49 GPEITCGAELVDALQFCVGDGRGFYFNKPTGYGSSRRAPQGTGIVDECCFRSCDLRLLEY 108

QY 61 CAPLPKAKASVRAQHTDMPKTKQKOPSTNKKMSQRR 102
 DB 109 CAPLPKAKASVRAQHTDMPKTKQKOPSTNKKMSQRR 150

RESULT 4
 IGBB RAT STANDARD; PRT; 181 AA.
 AC P08024;
 DT 01-AUG-1988 (Rel. 08, Created)
 DT 01-FEB-1991 (Rel. 17, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=8722423; PubMed=3034909;
 RA Shimatsu A., Rotwein P.;
 RT "Mosaic evolution of the insulin-like growth factors. Organization,
 RT sequence, and expression of the rat insulin-like growth factor I
 RT gene.";
 RT J. Biol. Chem. 262:7894-7900 (1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=8015572; PubMed=3658684;
 RA Shimatsu A., Rotwein P.;
 RT "Sequence of two rat insulin-like growth factor I mRNAs differing
 RT within the 5' untranslated region.";
 RT Nucleic Acids Res. 15:7196-7196 (1987).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=89127259; PubMed=3221878;
 RA Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
 RT "Structure of the rat insulin-like growth factor II transcriptional
 RT unit: heterogeneous transcripts are generated from two promoters by
 RT use of multiple polyadenylation sites and differential ribonucleic
 RT acid splicing.";
 RT Mol. Endocrinol. 2:1115-1126 (1988).
 RN [4]
 RP SEQUENCE OF 49-118.
 RX MEDLINE=89174609; PubMed=2538424;
 RA Nakamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
 RA Nakamura S., Niwa M., Zappi J.;
 RT "Primary structure of rat insulin-like growth factor-I and its
 RT biological activities.";
 RT J. Biol. Chem. 264:5616-5621 (1989).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P08024-1; Sequence=Displayed;

CC Name=IGF-IA; Sequence=External;
 CC IsoId=P08025-1; Sequence=External;
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC -----
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 CC -----

DR EMBL, M15650; AAA41214.1; -;
 DR EMBL, M15647; AAA41214.1; JOINED.
 DR EMBL, M15648; AAA41214.1; JOINED.
 DR EMBL, M15649; AAA41214.1; JOINED.
 DR EMBL, X06107; CAA29480.1; ALT_SEQ.
 DR EMBL, M15480; AAA41385.1; ALT_SEQ.
 DR PIR, A27804; A27804.
 DR HSP, P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF. 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 48
 FT PROPEP 49 118
 FT CHAIN 49 118
 FT DOMAIN 77 89
 FT DOMAIN 78 89
 FT DOMAIN 90 110
 FT DOMAIN 111 118
 FT DOMAIN 112 118
 FT PROPEP 119 181
 FT DISULFID 54 96
 FT DISULFID 66 109
 FT DISULFID 95 100
 FT CONFLICT 110 112
 FT SEQUENCE 181 AA; 20322 MW; 52BAB431875A1A06 CRC64;

Query Match
 Best Local Similarity 84.4%; Score 508; DB 1; Length 181;
 Matches 94; Conservativity 4; Mismatches 8; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFCVGDGRGFYFNKPTGYGSSRRAPQGTGIVDECCFRSCDLRLLEY 60
 DB 49 GPEITCGAELVDALQFCVGDGRGFYFNKPTGYGSSRRAPQGTGIVDECCFRSCDLRLLEY 108

QY 61 CAPLPKAKASVRAQHTDMPKTKQKOPSTNKKMSQRR 102
 DB 109 CAPLPKAKASVRAQHTDMPKTKQKOPSTNKKMSQRR 154

RESULT 5
 IGBB CAVPO STANDARD; PRT; 130 AA.
 AC P17647;
 DT 01-AUG-1990 (Rel. 15, Created)
 DT 10-OCT-2003 (Rel. 42, Last sequence update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1.
 OS Cavia porcellus (Guinea pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Hystriognathi; Caviidae; Cavia.
 OX NCBI_TaxID=10141;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX TISSUE=pancreas;
 RX MEDLINE=90332447; PubMed=2377480;
 RA Bell G.I., Stempien M.M., Fong N.M., Scino S.;
 RT "Sequence of a cDNA encoding guinea pig IGF-I.";
 RT Nucleic Acids Res. 18:4275-4275 (1990).

CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC
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 CC
 DR EMBL: X52951; CA37127.1; -.
 DR PIR: S12719; IGF1.
 DR HSP: P01343; IGF1.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam: PF00049; Insulin; 1.
 DR PRINTS: PR00277; INSULINB.
 DR SMART: SM00078; IGF; 1.
 DR PROSITE: PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 25
 FT CHAIN 26 95 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 26 54 B.
 FT DOMAIN 55 66 C.
 FT DOMAIN 67 87 A.
 FT DOMAIN 88 95 D.
 FT PROPEP 96 130 E. PEPTIDE.
 FT DISULFID 31 72 BY SIMILARITY.
 FT DISULFID 43 86 BY SIMILARITY.
 FT DISULFID 72 77 BY SIMILARITY.
 SQ SEQUENCE 130 AA; 14342 MW; 251B20AEDC5729FF CRC64;
 Query Match 77.2%; Score 465; DB 1; Length 130;
 Best Local Similarity 98.8%; Pred. No. 5.7e-42;
 Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 GPTLLGAEIVDALGVCCDGRGFYFNKPTGYSSSRAPQGTIVDECCFRSCDRLRLMY 60
 Db 26 GPTLLGAEIVDALGVCCDGRGFYFNKPTGYSSSRAPQGTIVDECCFRSCDRLRLMY 85
 Qy 61 CAPLKPAAKASRYRAQRHTDMPKTK 86
 Db 86 CAPLKPAAKASRYRAQRHTDMPKTK 111
 RESULT 6
 ID IGFA HUMAN STANDARD; PRT; 153 AA.
 AC P01343;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
 GN IGF1 OR IGF1.
 OS Homo sapiens (human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxId=9606;
 RN 1;
 RP SEQUENCE FROM N.A.
 RX MEDLINE=6168194; PubMed=2937782;
 RA Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.,
 RT "Organization and sequence of the human insulin-like growth factor I
 RT gene. Alternative RNA processing produces two insulin-like growth
 RT factor I precursor peptides.";
 RL J. Biol. Chem. 261:4828-4832(1986).
 RN 1;
 RP SEQUENCE FROM N.A.
 RX MEDLINE=84068210; PubMed=6358902;
 RA Jansen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.E.,

RA Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.;
 RT "Sequence of cDNA encoding human insulin-like growth factor I
 RT precursor.";
 RL Nature 306:609-611(1983).
 RN 3;
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86108910; PubMed=2935423; Bloux M., Sondermeyer P.,
 RA Le Bouc Y., Dreyer D., Jaeger F.,
 RT "Complete characterization of the human IGF-I nucleotide sequence
 RT isolated from a newly constructed adult liver cDNA library.";
 RL FEBS Lett. 196:108-112(1986).
 RN 14;
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86108862; PubMed=3002851;
 RA de Pagter-Holthuisen P., van Schaik F.M.A., Verduijn G.M.,
 RA van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.,
 RT "Organization of the human genes for insulin-like growth factors I
 RT and II.";
 RL FEBS Lett. 195:179-184(1986).
 RN 15;
 RP SEQUENCE FROM N.A.
 RX MEDLINE=91207342; PubMed=2018498;
 RA Steenbergh P.H., Koonen-Reenst A.M.C.B., Cleutjens C.B.J.M.,
 RA Sussenbach J.S.;
 RT "Complete nucleotide sequence of the high molecular weight human
 RT IGF-I mRNA.";
 RL Biochem. Biophys. Res. Commun. 175:507-514(1991).
 RN 16;
 RP SEQUENCE FROM N.A.
 RX MEDLINE=92186627; PubMed=1372070;
 RA Sandberg Nordqvist A.C., Stahlbow P.A., Lake M., Sara V.R.;
 RT "Characterization of two cDNAs encoding insulin-like growth factor I
 RT (IGF-1) in the human fetal brain.";
 RL Brain Res. Mol. Brain Res. 12:275-277(1992).
 RN 17;
 RP SEQUENCE OF 24-50 AND 119-153 FROM N.A.
 RX MEDLINE=84295593; PubMed=6382022;
 RA Dull T.O., Gray A., Hayflick J.S., Ullrich A.;
 RT "Insulin-like growth factor II precursor gene organization in
 RT relation to insulin gene family.";
 RL Nature 310:777-781(1984).
 RN 18;
 RP SEQUENCE OF 49-118.
 RX MEDLINE=78130171; PubMed=632300;
 RA Rinderknecht E., Humbel R.E.;
 RT "The amino acid sequence of human insulin-like growth factor I and
 RT its structural homology with prolinsulin.";
 RL J. Biol. Chem. 253:2769-2776(1978).
 RN 19;
 RP 3D-STRUCTURE MODELING.
 RX MEDLINE=83210259; PubMed=6189745;
 RA Blundell T.L., Begdarker S., Humbel R.E.;
 RT "Tertiary structures, receptor binding, and antigenicity of
 RT insulinlike growth factors.";
 RL Fed. Proc. 42:2592-2597(1983).
 RN 110;
 RP STRUCTURE BY NMR.
 RX MEDLINE=91242464; PubMed=2036417;
 RA Cooke R.M., Harvey T.S., Campbell I.D.;
 RT "Solution structure of human insulin-like growth factor I: a nuclear
 RT magnetic resonance and restrained molecular dynamics study.";
 RL Biochemistry 30:5484-5491(1991).
 RN 111;
 RP STRUCTURE BY NMR.
 RX MEDLINE=92316903; PubMed=1319992;
 RA Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M.,
 RA Yasuda T., Kobayashi Y.;
 RT "1H-NMR assignment and secondary structure of human insulin-like
 RT growth factor-I (IGF-I) in solution.";
 RL J. Biochem. 111:529-536(1992).
 RN 112;

RX DISULFIDE BONDS.
 RA MEDLINE=89207850; PubMed=3242681;
 RT Raschdorf F., Dahinden R., Maerkl W., Richter W.J., Merryweather J.P.;
 "Location of disulphide bonds in human insulin-like growth factors
 (IGFs) synthesized by recombinant DNA technology.";
 RT Biomed. Environ. Mass Spectrom. 16:3-8(1988).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 are structurally and functionally related to insulin but have a
 much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 Event=Alternative splicing; Named isoforms=2;
 Name=IGF-1A;
 IsoId=PI01343-1; Sequence=Displayed;
 Name=IGF-1B;
 IsoId=PI05019-1; Sequence=External;
 CC -1- SIMILARITY: Belongs to the insulin family.
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 or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL: M14156; AA52538.1; JOINED.
 DR EMBL: M12659; AA52538.1; JOINED.
 DR EMBL: M14153; AA52538.1; JOINED.
 DR EMBL: M14154; AA52538.1; JOINED.
 DR EMBL: X00173; CA24998.1; -
 DR EMBL: X03563; CA27250.1; ALT_SEQ.
 DR EMBL: M27544; AA52787.1; -
 DR EMBL: X03420; CA27152.1; -
 DR EMBL: X03421; CA27153.1; -
 DR EMBL: X03422; CA27154.1; -
 DR EMBL: X57025; CA40342.1; -
 DR EMBL: X56773; CA40092.1; -
 DR PIR: A92581; IGH01.
 DR PDB: 1GF1; 15-OCT-94.
 DR PDB: 2GF1; 15-APR-93.
 DR PDB: 3GF1; 15-APR-93.
 DR PDB: 1B9G; 23-FEB-99.
 DR PDB: 1GZK; 02-OCT-02.
 DR PDB: 1GZY; 02-OCT-02.
 DR PDB: 1GZ2; 25-JUL-02.
 DR PDB: 1H02; 25-JUL-02.
 DR PDB: 1H59; 16-MAY-02.
 DR PDB: 1IMX; 03-OCT-01.
 DR Genew: HGNC:5464; IGF1.
 DR MIM: 147440; -
 DR MIM: 265850; -
 DR GO: GO:0005159; F:insulin-like growth factor receptor binding; TAS.
 DR GO: GO:0005180; F:peptide hormone; TAS.
 DR GO: GO:0006928; P:cell motility; TAS.
 DR GO: GO:0006260; P:DNA replication; TAS.
 DR GO: GO:0009441; P:glycolate metabolism; TAS.
 DR GO: GO:0008284; P:positive regulation of cell proliferation; TAS.
 DR GO: GO:0007265; P:RNA protein signal transduction; TAS.
 DR GO: GO:0007165; P:signal transduction; TAS.
 DR GO: GO:0001501; P:skeletal development; TAS.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam: PF00049; Insulin; 1.
 DR PRINTS: PR00277; INSULIN.
 DR SMART: SMO0078; IGF; 1.
 DR PROSITE: PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; 3D-structure;
 KW Alternative splicing; Signal.
 FT SIGNAL 1 21
 FT PROPEP 22 48 POTENTIAL.
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR 1A.
 FT DOMAIN 49 77

FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 153 E PEPTIDE.
 FT DISULFID 54 96
 FT DISULFID 66 109
 FT DISULFID 95 100
 FT STRAND 51 51
 FT TURN 55 55
 FT HELIX 56 69
 FT TURN 87 88
 FT HELIX 91 95
 FT TURN 96 97
 FT STRAND 99 99
 FT HELIX 106 109
 SQ SEQUENCE 153 AA; 17026 MW; C6ECD92DCA9B37BC CRC64;
 Query Match 77.2%; Score 465; DB 1; Length 153;
 Best Local Similarity 96.8%; Pred. No. 6.8e-42;
 Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPELTGAGELVDALQFVCGDRGFYFNKPTGSGSSRRAPDTGIVDCFRSCDRLRLMY 60
 DB 49 GPELTGAGELVDALQFVCGDRGFYFNKPTGSGSSRRAPDTGIVDCFRSCDRLRLMY 108
 QY 61 CAPLKPAAKASVSAQGHDTMPKTK 86
 DB 109 CAPLKPAAKASVSAQGHDTMPKTK 134
 RESULT 7
 ID IGF1 CANFA STANDARD; PRT; 122 AA.
 AC P33712;
 DT 01-FEB-1994 (Rel. 28, Created)
 DT 01-FEB-1994 (Rel. 28, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-1) (Somatomedin)
 DE (Fragment).
 GN IGF1 OR IGF1A.
 OS Canis familiaris (Dog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
 OK NCBI_TaxID=9615;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=9336192; PubMed=8359700;
 RA Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;
 RT "Sequence of a cDNA encoding dog insulin-like growth factor I.";
 RL Gene 130:305-306(1993).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 are structurally and functionally related to insulin but have a
 much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
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 or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL: L08254; -; NOT_ANNOTATED_CDS.
 DR PIR: PNO622; PNO622.
 DR HSSP: P01343; IGF1.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam: PF00049; Insulin; 1.
 DR PRINTS: PR00277; INSULIN.
 DR SMART: SMO0078; IGF; 1.
 DR PROSITE: PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.

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FT FT NOM TER 1 1
FT SIGNAL <1 19 BY SIMILARITY.
FT CHAIN 20 89 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 20 48
FT DOMAIN 49 60
FT DOMAIN 61 81
FT DOMAIN 82 89
FT PROPEP 90 122
FT DISULFID 25 67
FT DISULFID 37 78
FT DISULFID 66 71
SO SEQUENCE 122 AA; 13407 MW; 036A004DC4E7D75 CRC64;

Query Match 76.4%; Score 460; DB 1; Length 122;
Jest Local Similarity 97.7%; Pred. No. 1,86-41;
Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITLGAELVVDALQVFCGDSGFYFNKPTGYGSSSRAPAPQTGIVDECFRSCDLRLRLMY 60
Db 20 GPEITLGAELVVDALQVFCGDSGFYFNKPTGYGSSSRAPAPQTGIVDECFRSCDLRLRLMY 79

QY 61 CAPLKPAKARSVPRAQRHTDPEKTXQ 86
Db 80 CAPLKPAKARSVPRAQRHTDPEKTXQ 105

RESULT 8
IGF1_PIG STANDARD; PRT; 153 AA.
AC P16545;
DT 01-AUG-1990 (Rel. 15, Created)
DT 01-AUG-1990 (Rel. 15, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (somatomedin).
GN IGF1.
OS Sus scrofa (Pig).
OC Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Suidae; Suidae; Sub.
OX NCBI_TaxID=9823;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=90221822; PubMed=2326169;
RA Mueller M., Brem G.;
RT "Nucleotide sequence of porcine insulin-like growth factor. 1:5'
RT untranslated region, exons 1 and 2 and mRNA."
RL Nucleic Acids Res. 18:364-364(1990).
RN [2]
RP SEQUENCE OF 20-153 FROM N.A.
RX MEDLINE=89096956; PubMed=321153;
RA Tavakoli A., Simmen F.A., Simmen R.C.M.;
RT "Porcine insulin-like growth factor-1 (pIGF-I): complementary
RT deoxyribonucleic acid cloning and uveitric expression of messenger
RT ribonucleic acid encoding evolutionarily conserved IGF-I peptides.",
RL Mol. Endocrinol. 2:674-681(1988).
RN [3]
RP SEQUENCE OF 1-21 FROM N.A.
RX STRAIN=White Landrace; TISSUE=Liver;
RX MEDLINE=94182809; PubMed=8297476;
RA Waller P.A., Dickson M.C., Huskisson N.S., Dauncey M.J., Buttery P.J.,
RA Gilmore R.S.;
RT "The porcine insulin-like growth factor-I gene: characterization and
RT expression of alternate transcription sites.",
RL J. Mol. Endocrinol. 11:201-211(1993).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC
CC EMBL; X17492; CAA55527.1; -
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CC DR EMBL; X52388; CAA36617.1; -
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CC DR EMBL; X52077; CAA36296.1; -
CC
CC DR EMBL; M31175; AAA31043.1; ALT_INIT.
CC
CC DR EMBL; X17638; CAA35632.1; -
CC
CC DR PIR; S12825; S12825.
CC
CC DR HSSP; P01343; IGF1.
CC
CC DR InterPro; IPRO04825; Ins/IGF/relex.
CC
CC DR Pfam; PF00049; Insulin; 1.
CC
CC DR PRINTS; PR00277; INSULINB.
CC
CC DR SMART; SM00078; IGF; 1.
CC
CC DR PROSITE; PS00262; INSULIN; 1.
CC
CC KW Insulin family; Growth factor; Plasma; Signal.
CC
CC FT SIGNAL 1 ? ?
CC
CC FT PROPEP 1 48
CC
CC FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
CC
CC FT DOMAIN 49 77 B.
CC
CC FT DOMAIN 78 89 C.
CC
CC FT DOMAIN 90 110 A.
CC
CC FT DOMAIN 111 118 D.
CC
CC FT PROPEP 119 153 E.PEPTIDE.
CC
CC FT DISULFID 54 96 BY SIMILARITY.
CC
CC FT DISULFID 66 109 BY SIMILARITY.
CC
CC FT DISULFID 95 100 BY SIMILARITY.
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CC SO SEQUENCE 153 AA; 17010 MW; 6098792DCDA0CD7D CRC64;
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CC Query Match 76.4%; Score 460; DB 1; Length 153;
CC Best Local Similarity 97.7%; Pred. No. 2,3e-41;
CC Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
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CC
CC Cy 1 GPEPTLCGAEALVYALGFCVGGDGFYFNKPTGYGSSRRAPATGTVDECCFRSCDLRLLEY 50
CC Db 49 GPEPTLCGAEALVYALGFCVGGDGFYFNKPTGYGSSRRAPATGTVDECCFRSCDLRLLEY 108
CC
CC
CC Cy 61 CAPLKPKAKARSVPRAQRHTTDPKTKQK 86
CC Db 109 CAPLKPKAKARSVPRAQRHTTDPKAKQK 134
CC
CC
CC RESULT 9
CC IGF1_BOVIN
CC ID IGF1_BOVIN STANDARD; PRT; 154 AA.
CC AC P07451;
CC DT 01-APR-1988 (Rel. 07, Created)
CC DT 01-NOV-1991 (Rel. 20, Last sequence update)
CC DT 10-OCT-2003 (Rel. 42, Last annotation update)
CC DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin) .
CC GN IGF1.
CC OS Bos taurus (Bovine) .
CC CC Bukaryota; Metazoa; Chordata; Craniota; Vertebrata; Euteleostomi;
CC CC Mammalia; Eutheria; Cetartiodactyla; Kuminantia; Pecora; Bovioidea;
CC CC Bovidae; Bovinae; Bos.
CC CC NCBI_TaxID=9913;
CC
CC [1]
CC RP SEQUENCE OF 2-154 FROM N.A.
CC RX MEDLINE=90175014; PubMed=2308858;
CC RA Focsis T, Murphy C, Gannon P.;
CC RT "Nucleotide sequence of the bovine insulin-like growth factor 1
CC RL (IGF-1) and its IGF-1A precursor."
CC RL Nucleic Acids Res. 18:676-676(1990).
CC
CC [2]
CC RP SEQUENCE OF 50-119 FROM N.A.
CC RX MEDLINE=95172127; PubMed=786798;
CC RA Schmidt A., Einspänner R., Amelgruber W., Sinowatz F., Schams D.;
CC RT "Expression of insulin-like growth factor 1 (IGF-1) in the bovine
CC RL oviduct during the oestrous cycle."
CC RL Exp. Clin. Endocrinol. 102:364-369(1994).
CC
CC [3]
CC RP SEQUENCE OF 50-119.

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```

RX MEDLINE=86085881; PubMed=3941093;
RA Honesger A., Hummel R.E.;
RT "Insulin-like growth factors I and II in fetal and adult bovine
RT serum. Purification, primary structures, and immunological
RT cross-reactivities."
RL J. Biol. Chem. 261:569-575(1986).
RN [4]
RP SEQUENCE OF 50-119.
RX MEDLINE=86268820; PubMed=3390164;
RA Francis G.L., Upton F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
RT "Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
RT and biological activities compared with those of a potent truncated
RT form."
RL Biochem. J. 251:95-103(1988).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; X15726; CA33746.1; -
DR EMBL; S76122; AAD14209.1; -
DR PIR; S12672; IGB01.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF.1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1
FT PROPEP 49
FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 50 78 B.
FT DOMAIN 79 90 A.
FT DOMAIN 91 111 C.
FT DOMAIN 112 119 D.
FT PROPEP 120 154 E. PEPTIDE.
FT DISULFID 55 97 BY SIMILARITY.
FT DISULFID 67 110 BY SIMILARITY.
FT DISULFID 96 101 BY SIMILARITY.
SQ SEQUENCE 154 AA; 17066 MW; 64201B6AF3140999 CRC64;

Query Match 76.4%; Score 460; DB 1; Length 154;
Best Local Similarity 97.7%; Pred. No. 2.3e-41;
Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPELTGAEIVDALQFVCGDGRGFYFNKPTGYGSSSRAPAPOTGIYDECCFSSCDLRLEMY 60
DB 50 GPELTGAEIVDALQFVCGDGRGFYFNKPTGYGSSSRAPAPOTGIYDECCFSSCDLRLEMY 109
QY 61 CAPLKPAKARSVRAQRHTDMPKXOK 86
DB 110 CAPLKPAKARSVRAQRHTDMPKXOK 135

RESULT 10
IGF1_CAPHI STANDARD; PRT; 154 AA.
AC PS1457;
DT 01-OCT-1996 (Rel. 34, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 15-MAR-2004 (Rel. 43, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1.

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OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
RN [1]
RP SEQUENCE FROM N.A., AND TISSUE SPECIFICITY.
RC STRAIN=Shiba; TISSUE=Liver;
RX MEDLINE=95290780; PubMed=7772848;
RA Mlkawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
RA Usumi K.;
RT "Tissue- and development-specific expression of goat insulin-like
RT growth factor-I (IGF-I) mRNAs."
RL Biosci. Biotechnol. Biochem. 59:759-761(1995).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- TISSUE SPECIFICITY: Expressed in all tissues examined: brain,
CC lung, liver, spleen, uterus, ovary, testis, heart and skeletal
CC muscle.
CC -----
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; D11378; BAA01976.1; -
DR EMBL; D26119; BAB7524.1; ALT. SEQ.
DR EMBL; D26116; BAB7524.1; JOINED.
DR EMBL; D26117; BAB7524.1; JOINED.
DR EMBL; D26118; BAB7524.1; JOINED.
DR PIR; JC2483; JC2483.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF.1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1
FT PROPEP 49
FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 50 78 B.
FT DOMAIN 79 90 C.
FT DOMAIN 91 111 A.
FT DOMAIN 112 119 D.
FT PROPEP 120 154 E. PEPTIDE.
FT DISULFID 55 97 BY SIMILARITY.
FT DISULFID 67 110 BY SIMILARITY.
FT DISULFID 96 101 BY SIMILARITY.
SQ SEQUENCE 154 AA; 17082 MW; 07238B6A3068422 CRC64;

Query Match 75.7%; Score 456; DB 1; Length 154;
Best Local Similarity 96.5%; Pred. No. 6e-41;
Matches 83; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 GPELTGAEIVDALQFVCGDGRGFYFNKPTGYGSSSRAPAPOTGIYDECCFSSCDLRLEMY 60
DB 50 GPELTGAEIVDALQFVCGDGRGFYFNKPTGYGSSSRAPAPOTGIYDECCFSSCDLRLEMY 109
QY 61 CAPLKPAKARSVRAQRHTDMPKXOK 86
DB 110 CAPLKPAKARSVRAQRHTDMPKXOK 135

RESULT 11
IGF1_SHEEP STANDARD; PRT; 154 AA.
ID IGF1_SHEEP

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AC P10763; (Rel. 11, Created)
 DT 01-JUN-1989 (Rel. 17, Last sequence update)
 DT 01-FEB-1991 (Rel. 42, Last annotation update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1.
 OS Ovis aries (Sheep).
 CC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 CC Bovidae; Caprinae; Ovis.
 CC NCBI_taxid=9940;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=90126234; PubMed=2575490;
 RT Wong E.A., Olsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.;
 RT "Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity
 RT in the mRNA population.";
 RL DNA 8:649-657 (1989).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=91197361; PubMed=2015053;
 RT Dickson M.C., Saunders J.C., Gilmour R.S.;
 RT "The ovine insulin-like growth factor-I gene: characterization,
 RT expression and identification of a putative promoter.";
 RL J. Mol. Endocrinol. 6:117-31 (1991).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=93221682; PubMed=8466647;
 RT Olsen S.M., Dean D.M., Wong E.A.;
 RT "Characterization of multiple transcription initiation sites of the
 RT ovine insulin-like growth factor-I gene and expression profiles of
 RT three alternatively spliced transcripts.";
 RL DNA Cell Biol. 12:243-251 (1993).
 RN [4]
 RP SEQUENCE OF 55-135 FROM N.A.
 RC STRAIN=Coopworth; TISSUE=Liver;
 RX MEDLINE=93250051; PubMed=8485157;
 RT Demmer J., Hill D.F., Petersen G.B.;
 RT "Characterization of two sheep insulin-like growth factor II cDNAs
 RT with different 5'-untranslated regions.";
 RL Biochim. Biophys. Acta 1173:79-80 (1993).
 RN [5]
 RP SEQUENCE OF 50-119.
 RX MEDLINE=89136887; PubMed=2537174;
 RA Francis G.L., McNeil K.A., Mallace J.C., Ballard F.J., Owens P.C.;
 RA "Sheep insulin-like growth factors I and II: sequences, activities
 RA and assays.";
 RL Endocrinology 124:1173-1183 (1989).
 RN [6]
 RP SEQUENCE OF 50-79.
 RX MEDLINE=89323215; PubMed=2752053;
 RA Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
 RA "Simultaneous isolation of insulin-like growth factors I and II from
 RA adult sheep serum.";
 RL Biochim. Biophys. Acta 997:27-35 (1989).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event-Alternative splicing; Named isoforms=3;
 CC Name=B;
 CC Name=A;
 CC IsoId=P10763-1; Sequence=Displayed;
 CC Name=C;
 CC IsoId=P10763-2; Sequence=VSP_002707;
 CC Name=C;
 CC IsoId=P10763-3; Sequence=VSP_002706;
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC -----
 DR EMBL; M30653; AAA80533.1; -
 DR EMBL; M30653; AAA80533.1; -
 DR EMBL; M31734; AAA80533.1; -
 DR EMBL; M31734; AAA80533.1; -
 DR EMBL; M31736; AAA31545.1; -
 DR EMBL; M31735; AAA31546.1; -
 DR EMBL; M31735; AAA31547.1; -
 DR EMBL; X69472; CAA48230.1; -
 DR EMBL; X69473; CAA48230.1; JOINED.
 DR EMBL; X69474; CAA48230.1; JOINED.
 DR EMBL; X69475; CAA48230.1; JOINED.
 DR EMBL; X69475; CAA48230.1; JOINED.
 DR EMBL; M88787; AAA31544.1; -
 DR PIR; S22877; A33390.
 DR HSPP; P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 DR Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
 KW SIGNAL
 FT SIGNAL 1 ? 49
 FT PROPEP 50 119
 FT CHAIN 50 119
 FT DOMAIN 50 78
 FT DOMAIN 79 90
 FT DOMAIN 91 111
 FT DOMAIN 112 119
 FT PROPEP 120 154
 FT DISULFID 35 97
 FT DISULFID 67 110
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 FT FT
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 FT FT
 FT CONFLICT 57 57
 FT FT
 SC SEQUENCE 154 AA; 17012 MW; E226C86AF653CF3F CRC64;
 Query Match 75.1%; Score 452; DB 1; Length 154;
 Best Local Similarity 96.5%; Pred. No. 1.6e-40;
 Matches 83; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
 QY 1 GPTLCAEIVDVLQVCGDRGYFNKPGYGYSSSRRAQGTGVECCRSGLDRLMY 60
 DB 50 GPTLCAEIVDVLQVCGDRGYFNKPGYGYSSSRRAQGTGVECCRSGLDRLMY 109
 QY 61 CAPLPAKASVRAQSHDTPKTK 86
 DB 110 CAPLPAKASVRAQSHDTPKTK 135
 RESULT 12
 ID IGFA_MOUSE STANDARD; PRT; 127 AA.
 AC P05017;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)

```

DE Insulin-like growth factor IA precursor (IGF-1A) (Somatomedin).
GN IGF1 OR IGF-1.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RC SEQUENCE FROM N.A.
RX MEDLINE=87040760; PubMed=3774549;
RA Bell G.I., Stempelen M.M., Fong N.M., Rall L.B.;
RT "Sequences of liver cDNAs encoding two different mouse insulin-like
RT growth factor I precursors."
RL Nucleic Acids Res. 14:7873-7882(1986).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-1A;
CC IsoId=P05017-1; Sequence=Displayed;
CC CC -1- SIMILARITY: Belongs to the insulin family.
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CC or send an email to license@ebi.ac.uk).
CC -----
CC EMBL; X04480; CAA28188.1; .
CC DR PIR; A25540; A25540.
CC DR HSSP; P01343; IGF1.
CC MDG; MG1:96432; IGF1.
CC GO; GO:0010001; P:glial cell differentiation; IMP.
CC DR GO; GO:0007399; P:neurogenesis; IMP.
CC DR InterPro; IPR004825; Ins/IGF/relex.
CC DR Pfam; PF00049; Insulin; 1.
CC DR PRINTS; PR00277; IGF; 1.
CC DR SMART; SM00778; IGF; 1.
CC DR PROSITE; PS00262; INSULIN; 1.
CC KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
FT SIGNAL 1 22 INSULIN-LIKE GROWTH FACTOR IA.
FT CHAIN 23 92
FT DOMAIN 23 51 B.
FT DOMAIN 52 63 C.
FT DOMAIN 64 84 A.
FT DOMAIN 85 92 D.
FT PROPEP 93 127 E. PEPTIDE.
FT DISULFID 28 70 BY SIMILARITY.
FT DISULFID 40 83 BY SIMILARITY.
FT DISULFID 69 74 BY SIMILARITY.
FT SEQUENCE 127 AA; 14120 MW; 105488CA6722CC2D7 CRC64;
SQ
Query Match 74.8%; Score 450; DB 1; Length 127;
Best Local Similarity 95.3%; Pred. No. 2.1e-40;
Matches 82; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGYDECCFRSCDLRLLEY 60
DB 23 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGYDECCFRSCDLRLLEY 82
QY 61 CAPLPKAKAARSVAARQRTMDPKYOK 86
DB 83 CAPLPKAKAARSVAARQRTMDPKYOK 108
RESULT 13
IGFA_RAT
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 CC or send an email to license@isb-sib.ch).

DR EMBL; X06043; CA29436.1; -
 DR EMBL; M15651; AAA41215.1; -
 DR EMBL; M15647; AAA41215.1; JOINED.
 DR EMBL; M15648; AAA41215.1; JOINED.
 DR EMBL; M15649; AAA41215.1; JOINED.
 DR EMBL; M17714; AAA41227.1; -
 DR EMBL; M17335; AAA41386.1; -
 DR EMBL; M15481; AAA41387.1; ALT_INIT.
 DR PIR; B27804; B27804.
 DR HSP; P01343; IGFL.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT STGMAT 1 2
 FT PROPEP 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR 1A.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 153 E PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT CONFLICT 110 112 APL -> VRC (IN REF. 4).
 SQ SEQUENCE 153 AA; 17079 MW; 966F3C0FA4EB3DE7 CRC64;

Query Match 74.3%; Score 447; DB 1; Length 153;
 Best Local Similarity 94.2%; Pred. No. 5, 3e-40;
 Matches 81; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 GPEITLCAELVDALQVCGDGRGYFNKPTGYGSSSRAPQGTIVDECCFRSCLRLRLMY 60
 DB 49 GPEITLCAELVDALQVCGDGRGYFNKPTGYGSSSRAPQGTIVDECCFRSCLRLRLMY 108
 QY 61 CAPLKPKAKARSYRAQRHTDMPKTK 86
 DB 109 CAPLKPKAKARSYRAQRHTDMPKTK 134

RESULT 14
 IGFL_COTUA STANDARD; PRT; 124 AA.
 AC P51462;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
 DE (Fragment).
 GN IGFL.
 OS Coturnix coturnix japonica (Japanese quail).
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 CC Coturnix.
 OX NCBI_TaxID=93934;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=95187621; PubMed=7881819;
 RA Kita S., Iwaki M., Nakamura A., Miura Y., Takeraka A., Takahashi S.,
 RA Noguchi T.;
 RT "Insulin-like growth factor-I messenger RNA content in the oviduct of
 RT Japanese quail (Coturnix coturnix japonica): changes during growth
 RT and development or after estrogen administration.";

RL Comp. Biochem. Physiol. 109C:191-204(1994).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.

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DR EMBL; S75247; -; NOT_ANNOTATED_CDS.
 DR HSP; P01343; IGFL.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma.
 FT STGMAT 1 1
 FT PROPEP 1 1
 FT CHAIN 20 19 POTENTIAL.
 FT DOMAIN 20 48 INSULIN-LIKE GROWTH FACTOR 1.
 FT DOMAIN 49 60 B.
 FT DOMAIN 61 81 C.
 FT DOMAIN 82 89 A.
 FT PROPEP 90 124 D.
 FT DISULFID 25 67 E PEPTIDE.
 FT DISULFID 37 80 BY SIMILARITY.
 FT DISULFID 66 71 BY SIMILARITY.
 SQ SEQUENCE 124 AA; 13888 MW; 52254EB1BA52C3B6 CRC64;

Query Match 69.6%; Score 419; DB 1; Length 124;
 Best Local Similarity 88.4%; Pred. No. 3, 6e-37;
 Matches 76; Conservative 4; Mismatches 6; Indels 0; Gaps 0;

QY 1 GPEITLCAELVDALQVCGDGRGYFNKPTGYGSSSRAPQGTIVDECCFRSCLRLRLMY 60
 DB 20 GPEITLCAELVDALQVCGDGRGYFNKPTGYGSSSRAPQGTIVDECCFRSCLRLRLMY 79
 QY 61 CAPLKPKAKARSYRAQRHTDMPKTK 86
 DB 80 CAPLKPKAKARSYRAQRHTDMPKTK 105

RESULT 15
 IGFL_CHICK STANDARD; PRT; 153 AA.
 AC P18254;
 DT 01-NOV-1990 (Rel. 16, Created)
 DT 01-NOV-1990 (Rel. 16, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGFL.
 OS Gallus gallus (Chicken).
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 CC Gallus.
 OX NCBI_TaxID=9031;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=90190648; PubMed=2628728;
 RA Kajimoto Y., Rotwein P.;
 RT "Structure and expression of a chicken insulin-like growth factor I
 RT precursor."
 RL Mol. Endocrinol. 3:1907-1913(1989).
 RN [2]
 RP SEQUENCE OF 1-21 FROM N.A.
 RX MEDLINE=91236750; PubMed=2033062;

```

RA Rotwein P., Kajimoto Y.;
RT "Structure of the chicken insulin-like growth factor I gene reveals
RT conserved promoter elements."
RL J. Biol. Chem. 266:9724-9731 (1991).
RN [3]
RP SEQUENCE OF 49-118.
RX MEDLINE=91106695; PubMed=2272467;
RA Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upson F.M.,
RA McMurtry J.P., Wallace J.C.;
RT "Chicken insulin-like growth factor-I: amino acid sequence,
RT radioimmunoassay, and plasma levels between strains and during
RT growth."
RL Gen. Comp. Endocrinol. 79:459-468 (1990).
CC -I- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -I- SUBCELLULAR LOCATION: Secreted.
CC -I- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; M32791; AAA48828.1; -
DR EMBL; M74176; AAA48829.1; -
DR PIR; A41389; A41389.
DR HSSP; P01343; IGFI.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PRO0277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1
FT PROPEP 1 48
FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 49 77 B.
FT DOMAIN 49 78 89 C.
FT DOMAIN 78 89 90 110 A.
FT DOMAIN 90 110 111 118 D.
FT PROPEP 119 153 E. PEPTIDE.
FT DISULFID 54 96 BY SIMILARITY.
FT DISULFID 66 109 BY SIMILARITY.
FT DISULFID 95 100 BY SIMILARITY.
SQ SEQUENCE 153 AA; 17267 MW; AAEL3FDED13EE2P8 CRC64;

Query March 69.6%; Score 419; DB 1; Length 153;
Best Local Similarity 88.4%; Pred. No. 4.6e-37;
Matches 76; Conservative 4; Mismatches 6; Indels 0; Gaps 0;

QY 1 GPEITLCAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIYDECPSCDLRLTMY 60
Db 49 GPEITLCAELVDALQFVCGDRGFYFNKPTGYGSSSRRLHKKGIYDECCQSCDLRLTMY 108
QY 61 CAPLXPAKARSYRAQRHTDMKTKOK 86
Db 109 CAPIKPPKARSYRAQRHTDMPKAOK 134

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Search completed: March 3, 2004, 08:05:42
Job time: 8.0241 secs

GenCore version 5.1.6
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CM protein - protein search, using sw model

Run on: March 3, 2004, 07:50:54 ; Search time 11.7018 Seconds
(without alignments)
912.445 Million cell updates/sec

Title: US-09-852-261-6

Perfect score: 602

Sequence: 1 GPEITCGALVDALQFVCGD.....TNKKKSGRRRKGSTFEHK 111

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database:

1: PIR1:*
2: PIR2:*
3: PIR3:*
4: PIR4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match length	ID	Description
1	539	89.5	159 2 A26859	insulin-like growth
2	536	89.0	195 1 IGHU1B	insulin-like growth
3	521	86.5	133 2 A40912	insulin-like growth
4	508	84.4	181 2 A27804	insulin-like growth
5	465	77.2	137 1 IGGP1	insulin-like growth
6	465	77.2	137 2 A36552	insulin-like growth
7	465	77.2	153 1 IGHU1	insulin-like growth
8	460	76.4	122 2 FN0622	insulin-like growth
9	460	76.4	153 1 IGH01	insulin-like growth
10	460	76.4	153 2 S12825	insulin-like growth
11	456	75.7	154 2 JC2483	insulin-like growth
12	452	75.1	138 2 S22678	insulin-like growth
13	452	75.1	134 2 A33590	insulin-like growth
14	450	74.8	127 2 A25540	insulin-like growth
15	447	74.3	153 2 B25912	insulin-like growth
16	429	71.3	127 2 B40912	insulin-like growth
17	419	69.6	153 2 A41399	insulin-like growth
18	412.5	68.5	153 2 A36079	insulin-like growth
19	404	67.1	151 2 C54270	insulin-like growth
20	402	66.8	155 2 A46012	insulin-like growth
21	402	66.8	176 2 A41396	insulin-like growth
22	402	66.8	188 2 A54270	insulin-like growth
23	402	66.8	188 2 B54270	insulin-like growth
24	398	66.1	149 2 D54270	insulin-like growth
25	398	66.1	176 2 A46244	insulin-like growth
26	301.5	50.1	126 2 S66485	insulin-like growth
27	298	49.5	193 2 A53697	insulin-like growth
28	272	45.2	214 2 B46244	insulin-like growth
29	246.5	40.9	187 2 T10897	insulin-like growth

30	242	40.2	179 2 S04858	insulin-like growth
31	226	39.2	155 1 IGH02	insulin-like growth
32	232	38.5	180 1 IGHU2	insulin-like growth
33	231	38.4	128 2 I57671	insulin-like growth
34	229	38.0	139 2 A38612	insulin-like growth
35	229	38.0	181 2 B60738	insulin-like growth
36	227	37.7	180 2 A24913	insulin-like growth
37	226.5	37.6	183 2 S02423	insulin-like growth
38	225	37.4	93 2 I56642	insulin-like growth
39	224.5	37.3	180 1 IGH72	insulin-like growth
40	220.5	36.6	183 2 I67610	insulin-like growth
41	213.5	35.5	79 2 I51240	insulin-like growth
42	209.5	34.8	210 2 S66484	insulin-like growth
43	197	32.7	66 2 A60740	insulin-like growth
44	175	29.1	44 2 A34049	insulin-like growth
45	159.5	26.5	50 1 INP1S	insulin-like growth

ALIGNMENTS

RESULT 1

A26859
insulin-like growth factor IB precursor - rat
C/Species: Rattus norvegicus (Norway rat)
C/Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999
C/Accession: A26859
R/Shimatsu, A.; Rotwein, P.
Nucleic Acids Res. 15, 7196, 1987
A/Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the 5' A/Reference number: A26859; MUID:86015572; PMID:3658684
A/Accession: A26859
A/Molecule type: mRNA
A/Residues: 1-159 <SH1>
A/Cross-references: GB:X06107; GB:X32260; GB:Y00429; NID:956424; PIDN:CAA29480.1; PID:9 C/Superfamily: Insulin
C/Keywords: alternative splicing; growth factor

Query Match 89.5%; Score 539; DB 2; Length 159;
Best Local Similarity 90.1%; Pred. No. 2.3e-48;
Matches 100; Conservative 3; Mismatches 8; Indels 0; Gaps 0;

QY	1	GPEITCGALVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDECCFRSCDIRRLMY 60
DB	49	GPEITCGALVDALQFVCGDRGFYFNKPTGYGSSIRRAPQGTIVDECCFRSCDIRRLMY 108
QY	61	CAPIKAKARSVRAQHRDMPKTKOKVPPSTNNKMSORRRKSGSTFEHK 111
DB	109	CAPIKPKAKSIRAPRHTDMPKTKOKSPPLSTHKRKLQRRRKSGSTFEHK 159

RESULT 2

IGHU1B
insulin-like growth factor I precursor, splice form B (validated) - human
N/Alternate names: IGF-IB; somatomedin C
N/Content: insulin-like growth factor IB-B1 amide
C/Species: Homo sapiens (man)
C/Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C/Accession: A01611; A26181; S30540; B48960; A42664
R/Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Biol. Chem. 261, 4828-4832, 1986
A/Title: Organization and sequence of the human insulin-like growth factor I gene. Alter A/Reference number: A92581; MUID:86168194; PMID:2937782
A/Accession: A01611
A/Molecule type: DNA
A/Residues: 1-195 <ROT1>
A/Cross-references: GB:M14155; NID:9183106; PIDN:AAA52337.1; PID:9183109
R/Rotwein, P.
Proc. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986
A/Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver.
A/Reference number: A26181; MUID:86094555; PMID:3455760
A/Accession: A26181
A/Molecule type: mRNA

A/Residues: 1-195 <ROT2>
 A/Cross-references: GB:M11568; NID:G183111; PIDN:AAA52539.1; PID:G183112
 R/Sanderby Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
 submitted to the EMBL Data Library, November 1990
 A/Description: Nucleotide sequence of the human fetal brain IGF-1b.
 A/Reference number: S30540
 A/Accession: S30540
 A/Molecule type: mRNA
 A/Residues: 1-195 <SAN>
 A/Cross-references: EMBL:X56774; NID:G32991; PIDN:CAA40093.1; PID:G32992
 R/Sanderby Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.F.; von Holst, H.;
 Cancer Res. 53, 2475-2478, 1993
 A/Title: Characterization of insulin-like growth factor 1 in human primary brain tumors.
 A/Reference number: A48960; MUID:93365440; PMID:495408
 A/Accession: B48960
 A/Molecule type: mRNA
 A/Residues: 1-195 <SA2>
 A/Cross-references: GB:X56774; GB:S61860; NID:G32991; PIDN:CAA40093.1; PID:G32992
 A/Experimental source: anaplastic oligodendroglioma
 A/Note: sequence modified after extraction from NCBI backbone
 A/Note: the authors translated the codon CAG for residues 124 and 133 as Gln
 R/Siegfried, J.M.; Kasprzyk, P.G.; Treton, A.M.; Mulsine, J.L.; Quinn, K.A.; Cuttitta,
 Proc. Natl. Acad. Sci. U.S.A. 89, 8107-8111, 1992
 A/Title: A mitogenic peptide amide encoded within the E peptide domain of the insulin-1
 A/Reference number: A42664; MUID:92390398; PMID:1325646
 A/Contents: annotation, 1B-1; amidated carboxyl end
 A/Comment: For an alternative splice form, see PIR:IGHUL.
 C/Keywords: alternative splicing
 A/Accession: GDB:IGF1
 A/Cross-references: GDB:120081; OMIM:147440
 A/Map position: 12q22-12q24.1
 A/Intons: 21/3; 74/1; 134/3
 C/Supfamily: insulin
 C/Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma
 F/1-21/Domain: signal sequence #status predicted <SIG>
 F/2-48/Domain: signal sequence #status predicted <PRO>
 F/49-118/Domain: insulin-like growth factor I #status predicted <NMT>
 F/49-118/Product: insulin-like growth factor I #status predicted <CH>
 F/78-89/Domain: insulin chain B-like #status predicted <CH>
 F/90-110/Domain: insulin chain A-like #status predicted <CH>
 F/111-116/Domain: D peptide #status predicted <CH>
 F/119-195/Domain: carboxyl-terminal propeptide (B peptide) #status predicted <CH>
 F/151-172/Product: insulin-like growth factor 1B-E1 amide #status predicted <MA>
 F/54-96,66-109,95-100/Disulfide bonds: #status predicted
 F/172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following 91)

Query Match 89.0% Score 536; DB 1; Length 195;
 Best Local Similarity 96.1%; Pred. No. 5,7e-48;
 Matches 98; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

DB 1 GPEITCGALVDALQFVCGDGRGFYFNKPTGYGSSRRAPQTGIVDECCFSCDLRLIEMV 60
 DB 49 GPEITCGALVDALQFVCGDGRGFYFNKPTGYGSSRRAPQTGIVDECCFSCDLRLIEMV 108

QY 61 CAPLPAKAAASVRAQRHTDMPKTOKYQPSSTNKKMSQRRR 102
 DB 109 CAPLPAKAAASVRAQRHTDMPKTOKYQPSSTNKKMSQRRR 150

RESULT 3
 A40912
 Insulin-like growth factor I precursor form 1 - rat
 C/Species: Rattus norvegicus (Norway rat)
 C/Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
 C/Accession: A40912
 R/Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; Lepitch, D.
 Mol. Endocrinol. 1, 243-248, 1987
 A/Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonucleic acid
 A/Reference number: A40912; MUID:88288198; PMID:3453891
 A/Accession: A40912
 A/Status: preliminary

A/Molecule type: mRNA
 A/Residues: 1-133 <ROB>
 A/Cross-references: GB:M15480; NID:G204749; PIDN:AAA41385.1; PID:G204750
 C/Supfamily: insulin

Query Match 86.5% Score 521; DB 2; Length 133;
 Best Local Similarity 87.4%; Pred. No. 1.4e-46;
 Matches 97; Conservative 3; Mismatches 11; Indels 0; Gaps 0;

DB 1 GPEITCGALVDALQFVCGDGRGFYFNKPTGYGSSRRAPQTGIVDECCFSCDLRLIEMV 60
 DB 23 GPEITCGALVDALQFVCGDGRGFYFNKPTGYGSSRRAPQTGIVDECCFSCDLRLIEMV 82

QY 61 CAPLPAKAAASVRAQRHTDMPKTOKYQPSSTNKKMSQRRR 111
 DB 83 CVRCKPTASASIRARHTDMPKTOKYQPSSTNKKMSQRRR 133

RESULT 4
 A27804
 Insulin-like growth factor I precursor - rat
 C/Species: Rattus norvegicus (Norway rat)
 C/Date: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
 C/Accession: A27804; 165502
 R/Shimatsu, A.; Rotwein, P.
 U. Biol. Chem. 262, 7894-7900, 1987
 A/Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence
 A/Reference number: A27804; MUID:87222423; PMID:3034909
 A/Accession: A27804
 A/Status: preliminary
 A/Molecule type: DNA
 A/Residues: 1-181 <SHT>
 A/Cross-references: GB:M15650; GB:J02743; NID:G204296; PIDN:AAA1214.1; PID:G204299
 R/Roberts, C.T.
 Biochem. Biophys. Res. Commun. 146, 1154-1159, 1987
 A/Title: Rat IGF-I cDNA's contain multiple 5'-untranslated regions.
 A/Reference number: 152218; MUID:87298553; PMID:3619921
 A/Accession: 165202
 A/Status: preliminary; translated from GB/EMBL/DBJ
 A/Molecule type: mRNA
 A/Residues: 1-27 <RES>
 A/Cross-references: GB:M17594; NID:G204759; PIDN:AAA41390.1; PID:G204760
 C/Supfamily: insulin
 C/Keywords: alternative splicing

Query Match 84.4% Score 508; DB 2; Length 181;
 Best Local Similarity 88.7%; Pred. No. 4.1e-45;
 Matches 94; Conservative 4; Mismatches 8; Indels 0; Gaps 0;

DB 1 GPEITCGALVDALQFVCGDGRGFYFNKPTGYGSSRRAPQTGIVDECCFSCDLRLIEMV 60
 DB 49 GPEITCGALVDALQFVCGDGRGFYFNKPTGYGSSRRAPQTGIVDECCFSCDLRLIEMV 108

QY 61 CAPLPAKAAASVRAQRHTDMPKTOKYQPSSTNKKMSQRRR 106
 DB 109 CAPLPAKAAASVRAQRHTDMPKTOKYQPSSTNKKMSQRRR 154

RESULT 5
 IGEP1
 Insulin-like growth factor I precursor - guinea pig
 C/Species: Cavia porcellus (guinea pig)
 C/Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
 C/Accession: S12719
 R/Bell, G.I.; Stempien, M.M.; Pong, N.M.; Sano, S.
 Nucleic Acids Res. 18, 4275-4275, 1990
 A/Title: Sequence of a cDNA encoding guinea pig IGF-I.
 A/Reference number: S12719; MUID:90332447; PMID:2377480
 A/Accession: S12719
 A/Molecule type: mRNA
 A/Residues: 1-137 <BEU>
 A/Cross-references: EMBL:X52951
 A/Note: it is uncertain whether Met-1 or Met-8 is the initiator

C:Superfamily: insulin
 C:Keywords: glycoprotein, growth factor, plasma
 F1-32/Domain: signal sequence #status predicted <SIG>
 F1-33-102/Product: insulin-like growth factor I #status predicted <MAT>
 F1-33-61/Domain: insulin chain B-like #status predicted <CHB>
 F1-62-73/Domain: insulin chain A-like #status predicted <CHA>
 F1-74-94/Domain: insulin chain A-like #status predicted <CHA>
 F1-95-102/Domain: D peptide #status predicted <CHD>
 F1-103-137/Domain: C-peptide #status predicted <CHP>
 F1-124/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 77.2%; Score 465; DB 1; Length 137;
 Best Local Similarity 98.8%; Pred. No. 8.5e-41;
 Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGVDECCFRSCDLRLLEY 60
 DB 33 GPEITCGAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGVDECCFRSCDLRLLEY 92
 QY 61 CAPLKPAKASVRAQRHTDMPKTK 86
 DB 93 CAPLKPAKASVRAQRHTDMPKTK 118

RESULT 6

A36552
 Insulin-like growth factor Ia precursor - human
 C:Species: Homo sapiens (man)
 C:Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999
 C:Accession: A36552
 R:Tobin, G.; Yee, D.; Bruener, N.; Retwein, P.
 M:1. Endocrinol. 4, 1914-1920, 1990
 A>Title: A novel human insulin-like growth factor I messenger RNA is expressed in normal
 A:Reference number: A36552; PMID:2082190
 A:Accession: A36552
 A:Status: Preliminary
 A:Molecule type: mRNA
 A:Residues: 1-137 <TOB>
 A:Cross-references: GB:M37484; NID:G184833; PIDN:AAA52789.1; PID:G184834
 C:Superfamily: insulin

Query Match 77.2%; Score 465; DB 2; Length 137;
 Best Local Similarity 98.8%; Pred. No. 8.5e-41;
 Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGVDECCFRSCDLRLLEY 60
 DB 33 GPEITCGAELVDALQFVCGDGRGFYFNKPTGYGSSSRAPQGTGVDECCFRSCDLRLLEY 92
 QY 61 CAPLKPAKASVRAQRHTDMPKTK 86
 DB 93 CAPLKPAKASVRAQRHTDMPKTK 118

RESULT 7

IGHU
 Insulin-like growth factor I precursor, splice form A [validated] - human
 N:Alternate names: IGF-1 long splice form precursor; IGF-1A; somatomedin C
 C:Species: Homo sapiens (man)
 C:Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
 A:Accession: A92581; A23614; J70571; A23622; A92226; A60483; S30519; A48960; I57
 R:Rowe, P.; Pollock, K.M.; Didler, D.K.; Krivt, G.G.
 J: Biol. Chem. 261, 4828-4832, 1986
 A>Title: Organization and sequence of the human insulin-like growth factor I gene. Alter

A:Reference number: A92581; PMID:86160194; PMID:2937782
 A:Accession: A92581
 A:Molecule type: DNA

A:Residues: 1-153 <ROT>
 A:Cross-references: GB:M4156; NID:G183107; PIDN:AAA52538.1; PID:G183110
 R:de Pagter-Holthuis, P.; van Schaik, F.M.A.; Verdun, G.M.; van Ommen, G.J.B.; Bouma
 P.B.S. Lett. 195, 179-184, 1986
 A>Title: Organization of the human genes for insulin-like growth factors I and II.
 A:Reference number: A91356; PMID:86108862; PMID:33002851

A:Accession: A23614
 A:Molecule type: DNA
 A:Residues: 24-153 <DEP>
 A:Cross-references: GB:X03420; GB:X00362; NID:G33020; PIDN:CAA27152.1; PID:G33021; GB:
 R:Jansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabay, K.H.
 Nature 306, 609-611, 1983
 A>Title: Sequence of cDNA encoding human insulin-like growth factor I precursor.
 A:Reference number: A93321; PMID:84068210; PMID:6358902
 A:Accession: A93321

A:Molecule type: mRNA
 A:Residues: 1-153 <CAN>
 A:Cross-references: GB:X00173; NID:G33015; PIDN:CAA24998.1; PID:G33016
 A:Note: Met-24 is proposed as a likely initiator
 R:Steinberg, P.H.; Koonen-Reemst, A.M.C.B.; Cleufkens, C.B.J.M.; Sussenbach, J.S.
 Biochem. Biophys. Res. Commun. 175, 507-514, 1991

A>Title: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.
 A:Reference number: J70571; PMID:91207342; PMID:2018498
 A:Accession: J70571

A:Molecule type: mRNA
 A:Residues: 1-153 <STB>
 A:Cross-references: EMBL:X57025; NID:G33007; PIDN:CAA40342.1; PID:G33008
 R:le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeijer, P.
 FEBS Lett. 196, 108-112, 1986
 A>Title: Complete characterization of the human IGF-I nucleotide sequence isolated from

A:Reference number: A23622; PMID:86108910; PMID:2235423
 A:Accession: A23622

A:Molecule type: mRNA
 A:Residues: 1-153 <LEB>
 A:Cross-references: GB:M27544; NID:G184829; PIDN:AAA52787.1; PID:G306927
 R:Rindernecht, E.; Humbel, R.E.
 J: Biol. Chem. 253, 2769-2776, 1978

A>Title: The amino acid sequence of human insulin-like growth factor I and its structure
 A:Reference number: A92226; PMID:7810171; PMID:652300
 A:Accession: A92226

A:Molecule type: protein
 A:Residues: 49-118 <RIN>
 R:Karey, K.P.; Margardt, H.; Stibasku, D.A.
 Blood 74, 1084-1092, 1989
 A>Title: Human platelet-derived mitogens. Identification of insulinlike growth factors

A:Reference number: A60483; PMID:89333462; PMID:2755253
 A:Accession: A60483

A:Molecule type: protein
 A:Residues: 49-53, 'X', 55-65, 'X', 67-75 <KAR>
 A:Experimental source: platelet lysate
 R:Nordqvist Sandberg, A.C.; Stahbow, P.A.; Lake, M.; Sara, V.R.
 submitted to the EMBL Data Library, November 1990

A:Description: Nucleotide sequence of the human fetal brain IGF-1a.
 A:Reference number: S30519
 A:Accession: S30519

A:Status: Preliminary
 A:Molecule type: mRNA
 A:Residues: 1-153 <NOR>
 A:Cross-references: EMBL:X56773; NID:G33989; PIDN:CAA40092.1; PID:G33990
 R:Sandberg-Nordqvist, A.C.; Stahbow, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.;
 Cancer Res. 53, 2475-2478, 1993

A>Title: Characterization of insulin-like growth factor 1 in human primary brain tumors
 A:Reference number: A48960; PMID:93265440; PMID:8495408
 A:Accession: A48960

A:Molecule type: mRNA
 A:Residues: 1-123, 'E', 125-132, 'E', 134-153 <SAN>
 A:Cross-references: GB:X56773; GB:S61841; NID:G32989
 A:Experimental source: anaplastic oligodendroglioma

A:Note: Sequence extracted from NCBI backbone (NCBI:133056, NCBI:133057)
 A:Note: Sequence inconsistent with the nucleotide translation
 R:Hall, L.B.; Scott, J.; Bell, G.T.
 Meth. Enzymol. 146, 239-248, 1987

A>Title: Human insulin-like growth factor I and II messenger RNA: isolation of complemer
 A:Reference number: I57044; PMID:86065102; PMID:3683205
 A:Accession: I57044

A:Status: Preliminary
 A:Molecule type: mRNA
 A:Residues: 24-153 <PAL>
 A:Cross-references: GB:M29644; NID:G183119; PIDN:AAA52543.1; PID:G183120

C/Comment: The insulin-like growth factors, isolated from plasma, are structurally and #
 C/Comment: For an alternative splice form, see PIR:IGHUB.
 C/Genetics:
 A:Gene: GDB:IGF1
 A/Cross-references: GDB:120081; OMIM:147440
 A/Map position: 12q22-12q24.1
 A/Intron: 21/3; 74/1; 134/3
 C/Superfamily: Insulin
 C/Keywords: alternative splicing; growth factor; plasma
 F:1-21/Domain: signal sequence #status predicted <SIG>
 F:22-48/Domain: propeptide #status predicted <PRO>
 F:49-118/Domain: insulin-like growth factor I #status experimental <MAT>
 F:49-77/Domain: insulin chain B-like #status experimental <CHB>
 F:78-89/Domain: insulin connecting C peptide-like #status experimental <CHC>
 F:90-110/Domain: insulin chain A-like #status experimental <CHA>
 F:111-153/Domain: D peptide #status experimental <CHD>
 F:119-153/Domain: carboxyl-terminal propeptide (B peptide) #status predicted <CPRO>
 F:154-96,66-109,95-100/Disulfide bonds: #status predicted

Query Match 77.2%; Score 465; DB 1; Length 153;
 Best Local Similarity 98.8%; Pred. No. 9,5e-41;
 Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFYCGDGRGFYFNKPTGYGSSSRAPQGTIVDECCRSDDLRLRLMY 60
 DB 49 GPEITCGAEIVDALQFYCGDGRGFYFNKPTGYGSSSRAPQGTIVDECCRSDDLRLRLMY 108

QY 61 CAPLKPAAKASVVAQGHRTDMPKTK 86
 DB 109 CAPLKPAAKASVVAQGHRTDMPKTK 134

RESULT 8
 PNO622
 Insulin-like growth factor Ia precursor - dog (fragment)
 C/Species: Canis lupus familiaris (dog)
 C/Date: 10-Mar-1994 #sequence revision 10-Mar-1994 #text change 07-May-1999
 A/Accession: PNO622
 R:DeLaFontaine, P.; Lou, H.; Harrison, D.G.; Bernstein, K.E.
 Gene 130, 305-306, 1993
 A/Title: Sequence of a cDNA encoding dog insulin-like growth factor I.
 A/Reference number: PNO622; MUID:9336192; PMID:8359700
 A/Accession: PNO622
 A/Molecule type: mRNA
 A/Residues: 1-122
 C/Comment: This protein is a potent inducer of DNA synthesis in multiple cell types, act
 C/Genetics:
 A:Gene: IGF1a
 C/Superfamily: Insulin
 C/Keywords: growth factor
 F:20-89/Product: insulin-like growth factor Ia (fragment) #status predicted <MAT>

Query Match 76.4%; Score 460; DB 2; Length 122;
 Best Local Similarity 97.7%; Pred. No. 2,5e-40;
 Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFYCGDGRGFYFNKPTGYGSSSRAPQGTIVDECCRSDDLRLRLMY 60
 DB 20 GPEITCGAEIVDALQFYCGDGRGFYFNKPTGYGSSSRAPQGTIVDECCRSDDLRLRLMY 79

QY 61 CAPLKPAAKASVVAQGHRTDMPKTK 86
 DB 80 CAPLKPAAKASVVAQGHRTDMPKTK 105

RESULT 9
 IGB01
 Insulin-like growth factor Ia precursor - bovine (fragment)
 N/Alternate names: IGF-I; somatomedin C
 C/Species: Bos primigenius taurus (cattle)
 C/Date: 31-Mar-1988 #sequence revision 28-Apr-1995 #text change 18-Jun-1999
 A/Accession: S12672; A25623; S00465
 R:Forstie, T.; Murphy, C.; Gannon, F.

Nucleic Acids Res. 18, 676, 1990
 A/Title: Nucleotide sequence of the bovine insulin-like growth factor I (IGF-I) and
 A/Reference number: S12672; MUID:9015014; PMID:2308858
 A/Accession: S12672
 A/Molecule type: mRNA
 A/Residues: 1-153 <FOR>
 A/Cross-references: EMBL:X15726; NID:9454; PIDN:CA33746.1; PID:9455
 A/Experimental source: liver
 R:Honegger, A.; Humbel, R.E.
 J. Biol. Chem. 261, 569-575, 1986
 A/Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purif
 A/Reference number: A92585; MUID:86085881; PMID:3941093
 A/Accession: A25623
 A/Molecule type: protein
 A/Residues: 49-118 <HON>
 R:Francis, G.L.; Upton, F.M.; Ballard, F.J.; McNeil, K.A.; Wallace, J.C.
 Biochem. J. 251, 95-103, 1988
 A/Title: Insulin-like growth factors I and II in bovine colostrum. Sequences and biol
 A/Reference number: S00465; MUID:8826820; PMID:3390164
 A/Accession: S00465
 A/Molecule type: protein
 A/Residues: 49-118 <FRA>
 A/Experimental source: colostrum
 A/Note: a form of IGF-I lacking the first three residues and possessing enhanced bio
 C/Superfamily: Insulin
 C/Keywords: alternative splicing; colostrum; growth factor; plasma
 F:1-20/Domain: signal sequence (fragment) #status predicted <SIG>
 F:22-48/Domain: propeptide #status predicted <PRO>
 F:49-118/Product: insulin-like growth factor Ia (active) #status experimental <MAT>
 F:49-77/Domain: insulin chain B-like #status experimental <DOB>
 F:78-89/Domain: insulin connecting C peptide-like #status experimental <CHC>
 F:90-110/Domain: insulin chain A-like #status experimental <CHA>
 F:111-119/Domain: insulin A chain-like #status experimental <CHD>
 F:119-153/Domain: carboxyl-terminal propeptide (B peptide) #status predicted <CPRO>
 F:154-96,66-109,95-100/Disulfide bonds: #status predicted

Query Match 76.4%; Score 460; DB 1; Length 153;
 Best Local Similarity 97.7%; Pred. No. 3,1e-40;
 Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFYCGDGRGFYFNKPTGYGSSSRAPQGTIVDECCRSDDLRLRLMY 60
 DB 49 GPEITCGAEIVDALQFYCGDGRGFYFNKPTGYGSSSRAPQGTIVDECCRSDDLRLRLMY 108

QY 61 CAPLKPAAKASVVAQGHRTDMPKTK 86
 DB 109 CAPLKPAAKASVVAQGHRTDMPKTK 134

RESULT 10
 S12825
 Insulin-like growth factor I precursor - pig
 N/Alternate names: somatomedin C
 C/Species: Sus scrofa domestica (domestic pig)
 C/Date: 13-Jan-1995 #sequence revision 13-Jan-1995 #text change 16-Jul-1999
 A/Accession: S12825; S21488; A34938; A60738
 R:Mueller, M.; Brem, G.
 Nucleic Acids Res. 18, 364, 1990
 A/Title: Nucleotide sequence of porcine insulin-like growth factor I: 5' untranslated
 A/Reference number: S12825; MUID:90221822; PMID:2326169
 A/Accession: S12825
 A/Status: preliminary
 A/Molecule type: DNA
 A/Molecule type: DNA
 A/Residues: 1-153 <MTB>
 A/Cross-references: EMBL:X52388
 R:Dickson, M.C.; Harkisson, N.S.; Gilmour, R.S.
 submitted to the EMBL Data Library, November 1989
 A/Description: Porcine insulin-like growth factor gene; sequence of exon and 5' non-c
 A/Accession: S21488
 A/Molecule type: DNA
 A/Residues: 1-21 <DIC>
 A/Cross-references: EMBL:X17638; NID:91995; PIDN:CA35632.1; PID:91996

R/Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.
 Mol. Endocrinol. 2, 674-681, 1988
 A>Title: Porcine insulin-like growth factor-I (IGF-I): complementary deoxyribonucleic acid.
 A:Reference number: A34938; PMID:89096956; PMID:3211153
 A:Accession: A34938
 A:Molecule type: mRNA
 A:Residues: 'Y', 21-153 <TAV>
 A:Cross-references: GB:M31175
 R/Francis, G.L.; Owens, P.C.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.
 J. Endocrinol. 122, 681-687, 1989
 A>Title: Purification, amino acid sequences and assay cross-reactivities of porcine insulin.
 A:Reference number: A60738; PMID:90039035; PMID:2809477
 A:Accession: A60738
 A:Molecule type: protein
 A:Residues: 49-117, 'X' <FRA>
 C:Genetics:
 A:Introns: 21/3; 74/1
 C:Superfamily: Insulin
 C:Keywords: growth factor
 F:1-22/Domain: signal sequence #status predicted <SIG>
 F:23-48/Domain: propeptide #status predicted <PRO>
 F:49-153/Product: insulin-like growth factor IA #status experimental <MAT>

Query Match 76.4%; Score 460; DB 2; Length 153;
 Best Local Similarity 97.7%; Pred. No. 3, 1e-40;
 Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSSRRAPOGTGIVDECCFRSCDLRLRLMY 60
 DB 49 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSSRRAPOGTGIVDECCFRSCDLRLRLMY 108
 61 CAPLKPAKARSVRARHTDMPKQK 86
 DB 109 CAPLKPAKARSVRARHTDMPKQK 134

RESULT 11

JC2483
 Insulin-like growth factor-I precursor - goat
 C:Species: Capra aegagrus hircus (domestic goat)
 C>Date: 16-Mar-1995 #sequence__revision 26-May-1995 #text_change 17-Mar-1999
 C:Accession: JC2483
 R/Nikawa, S.; Yoshikawa, G.; Aoki, H.; Yamano, Y.; Sakai, H.; Komano, T.
 Biosci. Biotechnol. Biochem. 59, 87-92, 1995
 A>Title: Dynamic aspects in the expression of the goat insulin-like growth factor-I (IGF-I).
 A:Reference number: JC2483; PMID:95201385; PMID:7765981
 A:Accession: JC2483
 A:Molecule type: mRNA
 A:Residues: 1-154 <MIK>
 A:Cross-references: GB:SI1378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118; DDBJ:D26119
 C:Genetics:
 A:Introns: 21/3; 75/1; 135/3
 C:Superfamily: Insulin
 F:1-49/Domain: signal sequence #status predicted <SIG>
 F:50-119/Product: insulin-like growth factor-I #status predicted <MAT>
 F:120-154/Region: E domain

Query Match 75.7%; Score 456; DB 2; Length 154;
 Best Local Similarity 96.5%; Pred. No. 8, 1e-40;
 Matches 83; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSSRRAPOGTGIVDECCFRSCDLRLRLMY 60
 DB 50 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSSRRAPOGTGIVDECCFRSCDLRLRLMY 109
 QY 61 CAPLKPAKARSVRARHTDMPKQK 86
 DB 110 CAPLKPAKARSVRARHTDMPKQK 135

RESULT 12

S22876

Insulin-like growth factor I precursor, splice form 2 - sheep
 C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C>Date: 23-Apr-1999 #sequence__revision 23-Apr-1999 #text_change 23-Jul-1999
 C:Accession: S22876; PMID:907198
 R/Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
 J. Mol. Endocrinol. 6, 17-31, 1991
 A>Title: The ovine insulin-like growth factor-I gene: characterization, expression and its regulation.
 A:Reference number: S22877; PMID:91197361; PMID:2015053
 A:Accession: S22877
 A:Molecule type: DNA
 A>Status: preliminary
 A:Residues: 1138 <DIC>
 A:Cross-references: EMBL:X51358
 R/Francis, G.L.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
 Endocrinology 124, 1173-1183, 1989
 A>Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
 A:Reference number: S07198; PMID:89136887; PMID:2537174
 A:Accession: S07198
 A:Molecule type: protein
 A:Residues: 34-103 <FRA>
 A:Experimental source: fetal plasma
 C:Genetics:
 A:Introns: 5/3; 59/1; 119/3
 C:Superfamily: Insulin
 C:Keywords: alternative splicing; growth factor; plasma
 F:7-33/Domain: propeptide #status predicted <PRO>
 F:34-103/Product: insulin-like growth factor I (active) #status experimental <MAT>
 F:34-103/Domain: insulin chain B-like #status predicted <DOB>
 F:63-74/Domain: insulin connecting peptide-like #status predicted <CHC>
 F:75-95/Domain: insulin chain A-like #status predicted <DOA>
 F:96-103/Domain: propeptide D #status predicted <CHD>
 F:104-138/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
 F:39-81, 51-94, 80-85/Disulfide bonds: #status predicted

Query Match 75.1%; Score 452; DB 2; Length 138;
 Best Local Similarity 96.5%; Pred. No. 1, 9e-39;
 Matches 83; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSSRRAPOGTGIVDECCFRSCDLRLRLMY 60
 DB 34 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSSRRAPOGTGIVDECCFRSCDLRLRLMY 93
 QY 61 CAPLKPAKARSVRARHTDMPKQK 86
 DB 94 CAPLKPAKARSVRARHTDMPKQK 119

RESULT 13

A33390
 Insulin-like growth factor I precursor, splice form 1 - sheep
 N:Alternate names: somatomedin C
 C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C>Date: 109-Mar-1990 #sequence__revision 27-Feb-1997 #text_change 23-Jul-1999
 C:Accession: S22877; A33390; S07965; S07198
 R/Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
 J. Mol. Endocrinol. 6, 17-31, 1991
 A>Title: The ovine insulin-like growth factor-I gene: characterization, expression and its regulation.
 A:Reference number: S22877; PMID:91197361; PMID:2015053
 A:Accession: S22877
 A:Molecule type: DNA
 A:Residues: 1-154 <DIC>
 A:Cross-references: EMBL:X51358
 R/Wong, E.A.; Olsen, S.W.; Godfredson, J.A.; Dean, D.M.; Wheaton, J.E.
 DNA 8, 649-657, 1989
 A>Title: Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity in the mRNA
 A:Reference number: A33390; PMID:90126234; PMID:2575490
 A:Accession: A33390
 A:Molecule type: mRNA
 A:Residues: 1-43, 'SS', 46-154 <WON>
 A:Cross-references: GB:M30653; NID:9165929; PIRN:AA80532.1; PID:9165930
 R/Hay, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.
 Biochim. Biophys. Acta 997, 27-35, 1989
 A>Title: Simultaneous isolation of insulin-like growth factors I and II from adult sheep

A:Reference number: S04972; MUID:69323215; PMID:2752053
A:Accession: S07965
A:Molecule type: protein
A:Residues: 50-79 <HEV>
R:Francis, G.L.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A:Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A:Reference number: S07198; MUID:69136887; PMID:2537174
A:Accession: S07198
A:Molecule type: protein
A:Residues: 50-119 <FRA>
A:Experimental source: fetal plasma
C:Genetics:
A:Introns: 21/3; 75/1; 135/3
C:Superfamily: insulin
C:Keywords: alternative splicing; growth factor; plasma
F:1-21/Domain: signal sequence #status predicted <SIG>
F:22-49/Domain: propeptide #status predicted <PRO>
F:50-119/Product: insulin-like growth factor I (active) #status experimental <MAT>
F:50-78/Domain: insulin chain B-like #status predicted <DOB>
F:79-90/Domain: insulin connecting peptide-like #status predicted <DOA>
F:91-111/Domain: insulin chain A-like #status predicted <CHC>
F:112-119/Domain: peptide D #status predicted <CHD>
F:120-154/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F:55-97,67-110,96-101/Disulfide bonds: #status predicted

Query Match 75.1%; Score 452; DB 2; Length 154;
Best Local Similarity 96.5%; Pred. No. 2,le-39;
Matches 83; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLRLEMY 60
DB 50 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLRLEMY 109
QY 61 CAPLKPAKASVRAQRRHTDMPKTK 86
DB 110 CAPLKPAKASVRAQRRHTDMPKTK 135

RESULT 14
A25540
Insulin-like growth factor IA precursor - mouse
N:Alternate names: IGF-1A; somatomedin C
C:Species: Mus musculus (house mouse)
C:Date: 30-Jun-1988 #sequence revision 30-Jun-1988 #text change 16-Jul-1999
C:Accession: A25540; 155295; 159090; B25540
R:Bell, G.I.; Stempien, M.M.; Fong, N.M.; Rall, L.B.
Nucleic Acids Res. 14, 7873-7882, 1986
A:Title: Sequences of liver cDNAs encoding two different mouse insulin-like growth factors
A:Reference number: A93643; MUID:87040760; PMID:3774549
A:Accession: A25540
A:Molecule type: mRNA
A:Residues: 1-127 <BEL>
A:Cross-references: GB:X04480; NID:951801; PIDN:CAA28168.1; PID:951802
R:Tollefsen, S.E.; Lajtha, R.; McCusker, R.H.; Clemmons, D.R.; Rotwein, P.
J. Biol. Chem. 264, 13810-13817, 1989
A:Title: Insulin-like growth factors (IGF) in muscle development. Expression of IGF-I, II
A:Reference number: 155295; MUID:89340472; PMID:2474537
A:Accession: 155295
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 49-108 <RES>
A:Cross-references: GB:M28139; NID:9341835; PIDN:AAA74553.1; PID:9550489
R:Mathews, L.S.; Norstedt, G.; Palminter, R.D.
Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986
A:Title: Regulation of insulin-like growth factor I gene expression by growth hormone.
A:Reference number: 159090; MUID:87092249; PMID:3467309
A:Accession: 159090
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 49-108 <RES>
A:Cross-references: GB:M1983; NID:9194495; PIDN:AAA37925.1; PID:9194496
C:Genetics:

A:Gene: IGF1
C:Superfamily: insulin
C:Keywords: alternative splicing; growth factor
F:1-22/Domain: signal sequence #status predicted <SIG>
F:23-127/Product: insulin-like growth factor IA (active) #status predicted <MAT>
F:23-51/Domain: insulin chain B-like #status predicted <DOB>
F:52-63/Domain: insulin connecting C peptide-like #status predicted <DOA>
F:64-84/Domain: insulin chain A-like #status predicted <CHC>
F:85-92/Domain: D peptide #status predicted <CHD>
F:93-127/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

Query Match 74.8%; Score 450; DB 2; Length 127;
Best Local Similarity 95.3%; Pred. No. 2,8e-39;
Matches 82; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLRLEMY 60
DB 23 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLRLEMY 82
QY 61 CAPLKPAKASVRAQRRHTDMPKTK 86
DB 83 CAPLKPAKASVRAQRRHTDMPKTK 108

RESULT 15

B27804
Insulin-like growth factor IA precursor - rat
N:Alternate names: IGF-1A; somatomedin C
C:Species: Rattus norvegicus (Norway rat)
C:Date: 16-Mar-1989 #sequence revision 16-Mar-1989 #text change 21-Jul-2000
C:Accession: B27804; A27849; J0133; A28504; J00088; A32857; A61096
R:Shimatsu, A.; Rotwein, P.
J. Biol. Chem. 262, 7894-7900, 1987
A:Title: Molecular evolution of the insulin-like growth factors. Organization, sequence,
A:Reference number: A27804; MUID:8722423; PMID:3034909
A:Accession: B27804
A:Molecule type: DNA
A:Residues: 1-153 <SHI>
A:Cross-references: GB:M15651; GB:J02743; NID:9204297; PIDN:AAA41215.1; PID:9204300
R:Casella, S.U.; Smith, E.P.; Van Wyk, J.L.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lu
DNA 6, 325-330, 1987
A:Title: Isolation of rat testis cDNAs encoding an insulin-like growth factor I precursor
A:Reference number: A27849; MUID:88003970; PMID:3652906
A:Accession: A27849
A:Molecule type: mRNA
A:Residues: 27-153 <CAS>
A:Cross-references: GB:M17335; NID:9204751; PIDN:AAA41386.1; PID:9204752
R:Kato, H.; Okoshi, A.; Miura, Y.; Noguchi, T.
Agric. Biol. Chem. 54, 1599-1601, 1990
A:Title: A new cDNA clone relating to larger molecular species of rat insulin-like growth factor I
A:Reference number: J0133; MUID:91103966; PMID:1368571
A:Accession: J0133
A:Molecule type: mRNA
A:Residues: 27-153 <KAT>
A:Cross-references: GB:J000698; NID:9220780; PIDN:BA00604.1; PID:9220781
A:Experimental source: liver
R:Murphy, U.J.; Bell, G.I.; Duckworth, M.L.; Friesen, H.G.
Endocrinology 121, 684-691, 1987
A:Title: Identification, characterization, and regulation of a rat complementary deoxy
A:Reference number: A28504; MUID:87246437; PMID:3595538
A:Accession: A28504
A:Molecule type: mRNA
A:Residues: 48-153 <KUR>
A:Cross-references: GB:M17714; NID:9204324; PIDN:AAA41227.1; PID:9204325
R:Kato, H.; Takemura, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
Agric. Biol. Chem. 54, 2225-2230, 1990
A:Title: Evidence of interconversion by molecular cloning of artificial inverted sequence
A:Reference number: J00088; MUID:91136779; PMID:1368576
A:Accession: J00088
A:Molecule type: mRNA
A:Residues: 48-153 <KAT>
A:Experimental source: liver
A:Note: the authors present evidence that this mRNA may contain an artifactual invert;

R; Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Nawa, M.
 J. Biol. Chem. 264, 5616-5621, 1989
 A>Title: Primary structure of rat insulin-like growth factor-I and its biological activity
 A;Reference number: A32857; MUID:89174609; PMID:2538424
 A;Accession: A32857
 A;Molecule type: protein
 A;Residues: 49-118 <TM>
 R;Canalis, E.; McCarthy, T.; Centrella, M.
 Endocrinology 122, 22-27, 1988
 A>Title: Isolation and characterization of insulin-like growth factor I (somatomedin-C)
 A;Reference number: A61096; MUID:88082445; PMID:3335205
 A;Accession: A61096
 A;Molecule type: protein
 A;Residues: 49-53, X', 55-65 <CAN>
 C;Superfamily: insulin
 C;Keywords: alternative splicing; growth factor
 P;49-118/Product: insulin-like growth factor I #status experimental <ILG>

Query Match 74.3%; Score 447; DB 2; Length 153;
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 Matches 81; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
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 DB 49 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDECCFRSCDLRLRLEY 108
 QY 61 CAPLKPAAASVRAQRHTDMPKIQK 86
 DB 109 CAPLKPAAASVRAQRHTDMPKIQK 134

Search completed: March 3, 2004, 07:56:14
 Job time : 11.7018 secs

GenCore version 5.1.6
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OK protein - protein search, using sw model

Run on: March 3, 2004, 07:55:33 ; Search time 151.455 Seconds
(without alignments)
154.752 Million cell updates/sec

Title: US-09-852-261-6

Perfect score: 602

Sequence: 1 GPETLCAELVDALQFVCGD.....TNKKMSQRRKSGSTFEERK 111

Scoring table:

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Gapop 10.0 , Gapext 0.5

Searched: 809742 seqs, 21153259 residues

Total number of hits satisfying chosen parameters: 809742

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications_AA:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep.*
2: /cgn2_6/ptodata/1/pubpaa/PC7_NEW_PUB.pep.*
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6: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep.*
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8: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep.*
9: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	602	100.0	111	9	US-09-852-261-6 Sequence 6, Appli
2	572.5	95.1	110	9	US-09-852-261-2 Sequence 2, Appli
3	539	89.5	133	14	US-10-141-088-2 Sequence 2, Appli
4	536	89.0	195	15	US-10-443-466A-20 Sequence 20, Appli
5	512	85.0	111	9	US-09-852-261-4 Sequence 4, Appli
6	468	77.7	105	9	US-09-852-261-14 Sequence 14, Appli
7	465	77.2	105	9	US-09-852-261-10 Sequence 10, Appli
8	465	77.2	137	14	US-10-251-661-8 Sequence 8, Appli
9	465	77.2	153	9	US-09-919-497-74 Sequence 74, Appli
10	465	77.2	153	14	US-10-136-639-3 Sequence 3, Appli
11	465	77.2	153	14	US-10-207-655-55 Sequence 55, Appli
12	460	76.4	105	14	US-10-238-114-3 Sequence 3, Appli
13	460	76.4	153	14	US-10-238-114-2 Sequence 2, Appli
14	454.5	75.5	191	9	US-09-921-398-41 Sequence 41, Appli
15	454.5	75.5	191	14	US-10-280-826-41 Sequence 41, Appli

16	420	69.8	105	9	US-09-852-261-12 Sequence 12, Appli
17	383	63.6	953	14	US-10-241-596-14 Sequence 14, Appli
18	382	63.5	70	9	US-09-848-664-23 Sequence 29, Appli
19	382	63.5	70	9	US-09-848-664-30 Sequence 30, Appli
20	382	63.5	70	9	US-09-903-327A-8 Sequence 8, Appli
21	382	63.5	70	10	US-09-858-935B-3 Sequence 3, Appli
22	382	63.5	70	13	US-10-028-410-1 Sequence 1, Appli
23	382	63.5	70	13	US-10-066-009A-1 Sequence 1, Appli
24	382	63.5	70	14	US-10-136-639-7 Sequence 1, Appli
25	382	63.5	70	14	US-10-136-841-7 Sequence 1, Appli
26	382	63.5	70	14	US-10-444-326-1 Sequence 1, Appli
27	382	63.5	70	15	US-10-272-531A-7 Sequence 7, Appli
28	382	63.5	70	15	US-10-272-483A-7 Sequence 7, Appli
29	382	63.5	70	16	US-10-444-262-1 Sequence 1, Appli
30	382	63.5	118	14	US-10-179-046-14 Sequence 14, Appli
31	382	63.5	155	9	US-09-921-398-39 Sequence 39, Appli
32	382	63.5	155	14	US-10-280-826-39 Sequence 39, Appli
33	382	63.5	510	9	US-09-903-327A-12 Sequence 12, Appli
34	375	62.3	91	14	US-10-323-046-42 Sequence 42, Appli
35	314	52.2	68	14	US-10-339-740-218 Sequence 218, App
36	300	49.8	56	13	US-10-066-009A-5 Sequence 5, Appli
37	235	39.0	180	14	US-10-207-655-57 Sequence 57, Appli
38	232	38.5	156	9	US-09-972-809-7 Sequence 7, Appli
39	232	38.5	180	14	US-10-081-119-38 Sequence 38, Appli
40	232	38.5	180	14	US-10-136-841-2 Sequence 2, Appli
41	232	38.5	180	14	US-10-097-340-145 Sequence 145, App
42	232	38.5	180	15	US-10-295-027-199 Sequence 199, App
43	232	38.5	180	15	US-10-272-531A-2 Sequence 2, Appli
44	232	38.5	180	15	US-10-173-999-99 Sequence 99, Appli
45	232	38.5	180	15	US-10-272-483A-2 Sequence 2, Appli

ALIGNMENTS

RESULT 1
US-09-852-261-6
; Sequence 6, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPIRK, GEOFFREY
; APPLICANT: TERENCE, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 6
; LENGTH: 111
; TYPE: PRT
; ORGANISM: Oryctolagus cuniculus
; US-09-852-261-6

Query Match	100.0%	Score 602;	DB 9;	Length 111;
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Matches 111;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;
Oy	1	GPETLCAELVDALQFVCGDGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLNLY 60		
Db	1	GPETLCAELVDALQFVCGDGRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLNLY 60		
Oy	61	CAPLKPAAARSVRAQHTMPTOKYQPPSTTKKMSQRRKSGSTFEERK 111		
Db	61	CAPLKPAAARSVRAQHTMPTOKYQPPSTTKKMSQRRKSGSTFEERK 111		
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US-09-852-261-2				
; Sequence 2, Application US/09852261				
; Patent No. US20020083477A1				

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/ GENERAL INFORMATION:
/ APPLICANT: GOLDSPIK, GEOFFREY
/ APPLICANT: TERENCE, GIORGIO
/ TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
/ FILE REFERENCE: 117-351
/ CURRENT APPLICATION NUMBER: US/09/852,261
/ PRIOR FILING DATE: 2001-05-10
/ PRIOR APPLICATION NUMBER: GB 0011278.9
/ PRIOR FILING DATE: 2000-05-10
/ NUMBER OF SEQ ID NOS: 14
/ SOFTWARE: Patent Ver. 2.1
/ SEQ ID NO 2
/ LENGTH: 110
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-852-261-2
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Query Match          95.1%; Score 572.5; DB 9; Length 110;
Best Local Similarity 96.4%; Pred. No. 1.8e-57;
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QY      61 CAPLKPAAKASVRAQRHTDMPKTOXQPPSTNKKXKSGRRKSGTFEEHK 111
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DB      61 CAPLKPAAKASVRAQRHTDMPKTOXQPPSTNKKXKSGRRKSGTFEEHK 110
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RESULT 3
US-10-161-088-2
/ Sequence 2, Application US/10161088
/ Publication No. US2003007761A1
/ GENERAL INFORMATION:
/ APPLICANT: Paric, Vendela
/ APPLICANT: Rosenstren, Linda
/ TITLE OF INVENTION: NEW METHODS
/ FILE REFERENCE: 13425-111001
/ CURRENT APPLICATION NUMBER: US/10/161,088
/ PRIOR FILING DATE: 2002-05-31
/ PRIOR APPLICATION NUMBER: SE 0101934-8
/ PRIOR FILING DATE: 2001-06-01
/ NUMBER OF SEQ ID NOS: 3
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 2
/ LENGTH: 133
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-161-088-2
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QY      1 GPEITCGALVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTIVDECCFRSDDLRLLEY 60
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QY      61 CAPLKPAAKASVRAQRHTDMPKTOXQPPSTNKKXKSGRRKSGTFEEHK 111
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RESULT 4
US-10-443-466A-20
/ Sequence 20, Application US/10443466A
/ Publication No. US20040018191A1
/ GENERAL INFORMATION:
/ APPLICANT: Wang, Yan
/ APPLICANT: Pachter, Jonathan A
/ APPLICANT: Hailey, Judith
/ APPLICANT: Greenberg, Robert
```

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/ APPLICANT: Leonard, Prestia
/ APPLICANT: Brans, Peter
/ APPLICANT: Reingertsh, Diane
/ APPLICANT: Williams, Denise
/ APPLICANT: Srinivasan, Mohan
/ TITLE OF INVENTION: NEUTRALIZING HUMAN ANTI-IGFR ANTIBODY
/ FILE REFERENCE: OC01533-K-US
/ CURRENT APPLICATION NUMBER: US/10/443,466A
/ PRIOR FILING DATE: 2003-05-22
/ PRIOR APPLICATION NUMBER: 60/383,459
/ PRIOR FILING DATE: 2002-05-24
/ PRIOR APPLICATION NUMBER: 60/393,214
/ PRIOR FILING DATE: 2002-07-02
/ PRIOR APPLICATION NUMBER: 60/436,254
/ PRIOR FILING DATE: 2002-12-23
/ NUMBER OF SEQ ID NOS: 120
/ SOFTWARE: Patent Ver. 3.1
/ SEQ ID NO 20
/ LENGTH: 195
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-443-466A-20
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QY      61 CAPLKPAAKASVRAQRHTDMPKTOXQPPSTNKKXKSGRRK 102
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DB      109 CAPLKPAAKASVRAQRHTDMPKTOXQPPSTNKKXKSGRRK 150
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RESULT 5
US-09-852-261-4
/ Sequence 4, Application US/09852261
/ Patent No. US20020083477A1
/ GENERAL INFORMATION:
/ APPLICANT: GOLDSPIK, GEOFFREY
/ APPLICANT: TERENCE, GIORGIO
/ TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
/ FILE REFERENCE: 117-351
/ CURRENT APPLICATION NUMBER: US/09/852,261
/ PRIOR FILING DATE: 2001-05-10
/ PRIOR APPLICATION NUMBER: GB 0011278.9
/ PRIOR FILING DATE: 2000-05-10
/ NUMBER OF SEQ ID NOS: 14
/ SOFTWARE: Patent Ver. 2.1
/ SEQ ID NO 4
/ LENGTH: 111
/ TYPE: PRT
/ ORGANISM: Rattus sp.
US-09-852-261-4
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QY      61 CAPLKPAAKASVRAQRHTDMPKTOXQPPSTNKKXKSGRRKSGTFEEHK 111
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RESULT 6
US-09-852-261-14
/ Sequence 14, Application US/09852261
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Patent No. US20020083477A1
GENERAL INFORMATION:
APPLICANT: GOLDSPIRK, GEOFFREY
APPLICANT: TERENGTI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 14
LENGTH: 105
TYPE: PR1
ORGANISM: Oryctolagus cuniculus
US-09-852-261-14

Query Match 77.7%; Score 468; DB 9; Length 105;
Best Local Similarity 100.0%; Pred. No. 1.3e-45;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPELCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIYDECCFRSCDLRLLEY 60
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QY 61 CAPLPAKARSVRAQRHTDMPKTOK 86
DB 61 CAPLPAKARSVRAQRHTDMPKTOK 86

RESULT 7
US-09-852-261-10
Sequence 10, Application US/09852261
Patent No. US20020083477A1
GENERAL INFORMATION:
APPLICANT: GOLDSPIRK, GEOFFREY
APPLICANT: TERENGTI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 10
LENGTH: 105
TYPE: PR1
ORGANISM: Homo sapiens
US-09-852-261-10

Query Match 77.2%; Score 465; DB 9; Length 105;
Best Local Similarity 98.8%; Pred. No. 2.9e-45;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPELCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIYDECCFRSCDLRLLEY 60
DB 1 GPELCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIYDECCFRSCDLRLLEY 60
QY 61 CAPLPAKARSVRAQRHTDMPKTOK 86
DB 61 CAPLPAKARSVRAQRHTDMPKTOK 86

RESULT 8
US-10-251-661-8
Sequence 8, Application US/10251661
Publication No. US2003016555A1
GENERAL INFORMATION:
APPLICANT: Alberini, Cristina M.
APPLICANT: Bear, Mark F.
TITLE OF INVENTION: Methods and Compositions for Regulating

TITLE OF INVENTION: Memory Consolidation
FILE REFERENCE: 3499.1001-003
CURRENT APPLICATION NUMBER: US/10/251,661
CURRENT FILING DATE: 2002-09-20
PRIOR APPLICATION NUMBER: 60/193,614
PRIOR FILING DATE: 2000-03-31
PRIOR APPLICATION NUMBER: PCT/US01/10661
PRIOR FILING DATE: 2001-04-02
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 8
LENGTH: 137
TYPE: PR1
ORGANISM: Homo sapiens
US-10-251-661-8

Query Match 77.2%; Score 465; DB 14; Length 137;
Best Local Similarity 98.8%; Pred. No. 4e-45;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPELCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIYDECCFRSCDLRLLEY 60
DB 33 GPELCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIYDECCFRSCDLRLLEY 92
QY 61 CAPLPAKARSVRAQRHTDMPKTOK 86
DB 93 CAPLPAKARSVRAQRHTDMPKTOK 118

RESULT 9
US-09-919-497-74
Sequence 74, Application US/09919497
Patent No. US2002010662A1
GENERAL INFORMATION:
APPLICANT: Muller, George L.
TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
FILE REFERENCE: B0801/7225
CURRENT APPLICATION NUMBER: US/09/919,497
CURRENT FILING DATE: 2001-07-31
PRIOR APPLICATION NUMBER: US 60/221,735
PRIOR FILING DATE: 2000-07-31
NUMBER OF SEQ ID NOS: 100
SOFTWARE: PatentIn Version 3.0
SEQ ID NO 74
LENGTH: 153
TYPE: PR1
ORGANISM: Homo sapiens
US-09-919-497-74

Query Match 77.2%; Score 465; DB 9; Length 153;
Best Local Similarity 98.8%; Pred. No. 4.6e-45;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPELCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIYDECCFRSCDLRLLEY 60
DB 49 GPELCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIYDECCFRSCDLRLLEY 108
QY 61 CAPLPAKARSVRAQRHTDMPKTOK 86
DB 109 CAPLPAKARSVRAQRHTDMPKTOK 134

RESULT 10
US-10-136-639-3
Sequence 3, Application US/10136639
Publication No. US20030072761A1
GENERAL INFORMATION:
APPLICANT: Lebowitz, Jonathan
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD
FILE REFERENCE: SW-008
CURRENT APPLICATION NUMBER: US/10/136,639
CURRENT FILING DATE: 2002-09-06

PRIOR APPLICATION NUMBER: US 60/329,650
 PRIOR FILING DATE: 2001-10-16
 NUMBER OF SEQ ID NOS: 4
 SOFTWARE: PatentIn version 3.0
 SEQ ID NO 3
 LENGTH: 153
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-136-639-3

Query Match 77.2%; Score 465; DB 14; Length 153;
 Best Local Similarity 98.8%; Pred. No. 4.6e-45;
 Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLRLEMY 60
 DB 49 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLRLEMY 108

QY 61 CAPLKPAAKARSVRAQRHTDMPKTK 86
 DB 109 CAPLKPAAKARSVRAQRHTDMPKTK 134

RESULT 11
 US-10-207-655-55
 Sequence 55, Application US/10207655
 Publication No. US20030118592A1
 GENERAL INFORMATION:
 APPLICANT: Ledbetter, Jeffrey A.
 APPLICANT: Hayden-Ledbetter, Martha S.
 TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
 FILE REFERENCE: 390069.401C1
 CURRENT APPLICATION NUMBER: US/10/207,655
 CURRENT FILING DATE: 2002-07-25
 NUMBER OF SEQ ID NOS: 426
 SOFTWARE: PatentIn version 3.0
 SEQ ID NO 55
 LENGTH: 153
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-207-655-55

Query Match 77.2%; Score 465; DB 14; Length 153;
 Best Local Similarity 98.8%; Pred. No. 4.6e-45;
 Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLRLEMY 60
 DB 49 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLRLEMY 108

QY 61 CAPLKPAAKARSVRAQRHTDMPKTK 86
 DB 109 CAPLKPAAKARSVRAQRHTDMPKTK 134

RESULT 12
 US-10-238-114-3
 Sequence 3, Application US/10238114
 Publication No. US20030100073A1
 GENERAL INFORMATION:
 APPLICANT: Merital
 APPLICANT: ANDREONT, Christine Michele
 TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE RH
 FILE REFERENCE: 454313-3165.1
 CURRENT APPLICATION NUMBER: US/10/238,114
 CURRENT FILING DATE: 2002-09-10
 PRIOR APPLICATION NUMBER: FR 01 11736
 PRIOR FILING DATE: 2001-09-11
 PRIOR APPLICATION NUMBER: US 60/318,666
 PRIOR FILING DATE: 2001-09-12
 NUMBER OF SEQ ID NOS: 20
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 3

LENGTH: 105
 TYPE: PRT
 ORGANISM: Felis catus
 US-10-238-114-3

Query Match 76.4%; Score 460; DB 14; Length 105;
 Best Local Similarity 97.7%; Pred. No. 1.1e-44;
 Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLRLEMY 60
 DB 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLRLEMY 60

QY 61 CAPLKPAAKARSVRAQRHTDMPKTK 86
 DB 61 CAPLKPAAKARSVRAQRHTDMPKTK 86

RESULT 13
 US-10-238-114-2
 Sequence 2, Application US/10238114
 Publication No. US20030100073A1
 GENERAL INFORMATION:
 APPLICANT: Merital
 APPLICANT: ANDREONT, Christine Michele
 TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE
 FILE REFERENCE: 454313-3165.1
 CURRENT APPLICATION NUMBER: US/10/238,114
 CURRENT FILING DATE: 2002-09-10
 PRIOR APPLICATION NUMBER: FR 01 11736
 PRIOR FILING DATE: 2001-09-11
 PRIOR APPLICATION NUMBER: US 60/318,666
 PRIOR FILING DATE: 2001-09-12
 NUMBER OF SEQ ID NOS: 20
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 2
 LENGTH: 153
 TYPE: PRT
 ORGANISM: Felis catus
 US-10-238-114-2

Query Match 76.4%; Score 460; DB 14; Length 153;
 Best Local Similarity 97.7%; Pred. No. 1.1e-44;
 Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLRLEMY 60
 DB 49 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLRLEMY 108

QY 61 CAPLKPAAKARSVRAQRHTDMPKTK 86
 DB 109 CAPLKPAAKARSVRAQRHTDMPKTK 134

RESULT 14
 US-09-921-398-41
 Sequence 41, Application US/09921398
 Patent No. US20020055169A1
 GENERAL INFORMATION:
 APPLICANT: Tekamp-Olson, Patricia
 TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
 PROTEINS IN YEAST
 NUMBER OF SEQUENCES: 41
 CORRESPONDENCE ADDRESS:
 ADDRESS: Bell Seltzer IP Group of Alston & Bird, LLP
 STREET: 3605 Glenwood Ave. Suite 310
 CITY: Raleigh
 STATE: NC
 COUNTRY: US
 ZIP: 27622
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/921.398
FILING DATE: 02-Aug-2001
CLASSIFICATION: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acid
TOPOLOGY: 1:linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 41:
US-09-921-398-41

Query Match 75.5%; Score 454.5; DB 9; Length 191;
Best Local Similarity 97.7%; Pred. No. 9.4e-44;
Matches 85; Conservative 1; Mismatches 0; Indels 1; Gaps 1;

QY 1 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYSSSSRRAPQTGIYDECCFRSCDLRLLEY 60
DB 86 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYSSSSRRAPQTGIYDECCFRSCDLRLLEY 145
QY 61 CAPLKPAKAA-RSVRAQRHTMPKTK 86
DB 146 CAPLKPAKAA-RSVRAQRHTMPKTK 172

RESULT 15

US-10-280-826-41
Sequence 41, Application US/10280826
Publication No. US20030077831A1
GENERAL INFORMATION:
APPLICANT: Tekamp-Olsen, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/280.826
FILING DATE: 25-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/989.251
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids

TYPE: amino acid
TOPOLOGY: 1:linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 41:
US-10-280-826-41

Query Match 75.5%; Score 454.5; DB 14; Length 191;
Best Local Similarity 97.7%; Pred. No. 9.4e-44;
Matches 85; Conservative 1; Mismatches 0; Indels 1; Gaps 1;

QY 1 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYSSSSRRAPQTGIYDECCFRSCDLRLLEY 60
DB 86 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYSSSSRRAPQTGIYDECCFRSCDLRLLEY 145
QY 61 CAPLKPAKAA-RSVRAQRHTMPKTK 86
DB 146 CAPLKPAKAA-RSVRAQRHTMPKTK 172

Search completed: March 3, 2004, 08:14:24
Job time: 152.455 secs

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OM protein - protein search, using sw model

Run on: March 3, 2004, 07:53:43 ; Search time 14.0422 Seconds
(without alignments)
408,091 Million cell updates/sec

Title: US-09-852-261-6

Perfect score: 602
Sequence: 1 GPEITLGAIVDALQFVCGD.....TTRKKKSQRKRGSTFRESHK 111

Scoring table:

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Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database :

1: Issued Patents AA:*
2: /cgn2_6/prodata/2/1aa/5A_COMB.pep:*
3: /cgn2_6/prodata/2/1aa/5B_COMB.pep:*
4: /cgn2_6/prodata/2/1aa/5A_COMB.pep:*
5: /cgn2_6/prodata/2/1aa/PCTUS_COMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	length	ID	Description
1	602	100.0	121	3	US-09-142-583A-4
2	465	77.2	137	1	US-07-953-230A-10
3	465	77.2	152	3	US-08-950-720A-9
4	465	77.2	153	1	US-08-219-878A-1
5	465	77.2	153	5	PCT-US93-04329-1
6	465	77.2	156	3	US-09-142-583A-11
7	458	76.1	119	6	5405942-1
8	454.5	75.5	191	3	US-08-989-251-41
9	454.5	75.5	191	3	US-09-340-250-41
10	454.5	75.5	191	4	US-09-528-108-41
11	409	67.9	78	2	US-08-460-890A-47
12	409	67.9	78	3	US-08-167-641C-47
13	409	67.9	78	3	US-08-460-971A-47
14	409	67.9	78	3	US-08-462-040-47
15	398	66.1	176	1	US-07-953-230A-9
16	383	63.6	953	4	US-09-255-829-14
17	382	63.5	70	1	US-07-947-035-1
18	382	63.5	70	1	US-07-776-272-17
19	382	63.5	70	1	US-07-958-903A-17
20	382	63.5	70	1	US-08-462-018-17
21	382	63.5	70	1	US-08-823-245-17
22	382	63.5	70	1	US-08-482-271-1
23	382	63.5	70	3	US-09-080-120A-1
24	382	63.5	70	3	US-08-432-517-1
25	382	63.5	70	4	US-07-963-329A-1
26	382	63.5	70	4	US-09-477-924-1
27	382	63.5	70	4	US-09-723-981-1

28	382	63.5	70	4	US-09-723-896-1	Sequence 1, Appl1
29	382	63.5	70	5	PCT-US92-09443A-1	Sequence 1, Appl1
30	382	63.5	70	5	PCT-US93-11458-1	Sequence 1, Appl1
31	382	63.5	70	5	PCT-US95-08925-1	Sequence 1, Appl1
32	382	63.5	94	1	US-07-989-845-28	Sequence 28, Appl1
33	382	63.5	94	1	US-07-989-844-12	Sequence 12, Appl1
34	382	63.5	94	1	US-08-151-044-12	Sequence 12, Appl1
35	382	63.5	94	1	US-08-240-121-12	Sequence 12, Appl1
36	382	63.5	94	1	US-08-451-241-12	Sequence 12, Appl1
37	382	63.5	94	5	PCT-US93-11297-12	Sequence 28, Appl1
38	382	63.5	94	5	PCT-US93-11297-12	Sequence 28, Appl1
39	382	63.5	118	3	US-09-029-267-14	Sequence 8, Appl1
40	382	63.5	155	1	US-08-328-961-8	Sequence 8, Appl1
41	382	63.5	155	1	US-08-452-197-8	Sequence 8, Appl1
42	382	63.5	155	3	US-08-968-251-39	Sequence 39, Appl1
43	382	63.5	155	3	US-09-340-250-39	Sequence 39, Appl1
44	382	63.5	155	4	US-09-528-108-39	Sequence 39, Appl1
45	379	63.0	70	1	US-08-180-572-5	Sequence 5, Appl1

ALIGNMENTS

RESULT 1
US-09-142-583A-4
; Sequence 4, Application US/09142583A
; Patent No. 6221842

GENERAL INFORMATION:

APPLICANT: GOLDSPIK, GEOFREY

TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS

NUMBER OF SEQUENCES: 11

CORRESPONDENCE ADDRESS:

ADDRESSEE: NIXON & VANDERHAYE P.C.

STREET: 1100 NORTH GLEBE ROAD

CITY: ARLINGTON

STATE: VA

COUNTRY: USA

ZIP: 22201

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/142,583A

FILING DATE: 29-Oct-1998

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: WO PCT/CB97/00658

FILING DATE: 11-MAR-1997

APPLICATION NUMBER: GB 9605124.8

FILING DATE: 11-MAR-1996

ATTORNEY/AGENT INFORMATION:

NAME: SADOFF, B. J.

REGISTRATION NUMBER: 36663

REFERENCE/DOCKET NUMBER: 117-263

TELECOMMUNICATION INFORMATION:

TELEPHONE: 7038164000

TELEFAX: 7038164100

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 121 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 4:

Query/Match 100.0%; Score 602; DB 3; length 121;
Best Local Similarity 100.0%; Pred. No. 4.6e-64;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 11 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAAPQTGIVDECCFRSCDLRLRLMY 70
QY 61 CAPLKPAKAAASVRAQRHTDMPKTKOYOPSTNKKOMSORRRKSGSTPEERK 111
Db 71 CAPLKPAKAAASVRAQRHTDMPKTKOYOPSTNKKOMSORRRKSGSTPEERK 121

RESULT 2
US-07-953-230A-10
Sequence 10, Application US/07953230A
Patent No. 5478779

GENERAL INFORMATION:
APPLICANT: CHEN, Thomas T
APPLICANT: SHAMLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESSES:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Crane-Felty, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 137 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Peptide
LOCATION: 7
OTHER INFORMATION: /note= "Gap of 2 after 7."
FEATURE:
NAME/KEY: Peptide
LOCATION: 31
OTHER INFORMATION: /note= "Gap of 1 after 31."
FEATURE:
NAME/KEY: Peptide
LOCATION: 116
OTHER INFORMATION: /note= "Gap of 27 after 116."
US-07-953-230A-10

Query Match 77.2%; Score 465; DB 1; Length 137;
Best Local Similarity 98.8%; Pred. No. 1e-47;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAAPQTGIVDECCFRSCDLRLRLMY 60
Db 33 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAAPQTGIVDECCFRSCDLRLRLMY 92
QY 61 CAPLKPAKAAASVRAQRHTDMPKTKOYOPSTNKKOMSORRRKSGSTPEERK 86
Db 93 CAPLKPAKAAASVRAQRHTDMPKTKOYOPSTNKKOMSORRRKSGSTPEERK 118

RESULT 3
US-08-950-720A-9
Sequence 9, Application US/08950720A
Patent No. 6046028

GENERAL INFORMATION:
APPLICANT: Conklin, Darrell C.
APPLICANT: Lofton-Day, Catherine E.
APPLICANT: Lok, Si
APPLICANT: Jaspers, Stephen R.
TITLE OF INVENTION: INSULIN HOMOLOG
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESSES:
ADDRESSEE: ZymoGenetics, Inc.
STREET: 1201 Eastlake Avenue East
CITY: Seattle
STATE: WA
COUNTRY: USA
ZIP: 98102
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/950,720A
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Sawistak, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 96-09
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
TELEFAX: 206-442-6678
TELEX:
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 152 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. 6046028e
US-08-950-720A-9

Query Match 77.2%; Score 465; DB 3; Length 152;
Best Local Similarity 98.8%; Pred. No. 1.2e-47;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAAPQTGIVDECCFRSCDLRLRLMY 60
Db 23 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAAPQTGIVDECCFRSCDLRLRLMY 82
QY 61 CAPLKPAKAAASVRAQRHTDMPKTKOYOPSTNKKOMSORRRKSGSTPEERK 86
Db 83 CAPLKPAKAAASVRAQRHTDMPKTKOYOPSTNKKOMSORRRKSGSTPEERK 108

RESULT 4
US-08-219-878A-1
Sequence 1, Application US/08219878A
Patent No. 5473054

GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESSES:
ADDRESSEE: Woodcock Washburn
ADDRESSEE: Kurtz Mackiewicz & No. 5473054r1s

STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 MB STORAGE
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/219,878A
FILING DATE: 30-MAR-1994
CLASSIFICATION: 514
PRIOR APPLICATION NUMBER: US/07/881,524
FILING DATE: 08-MAY-1992
ATTORNEY/AGENT INFORMATION:
NAME: Mark Deluca
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-1240
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 153
TYPE: amino acid
TOPOLOGY: linear
US-08-219-878A-1

Query Match 77.2%; Score 465; DB 1; Length 153;
Best Local Similarity 98.8%; Pred. No. 1.2e-47;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLMY 60
DB 49 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLMY 108

QY 61 CAPLKPAAKSARSVRAQRHTDMPKTQK 86
DB 109 CAPLKPAAKSARSVRAQRHTDMPKTQK 134

RESULT 5
PCT-US93-04329-1
Sequence 1, Application PC/TUS9304329
GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baseerga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock Washburn
STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 MB STORAGE
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/04329
FILING DATE: 19930507
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/881,524
FILING DATE: 08-MAY-92
ATTORNEY/AGENT INFORMATION:
NAME: Mark Deluca

REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-0649
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 153
TYPE: AMINO ACID
TOPOLOGY: linear
PCT-US93-04329-1

Query Match 77.2%; Score 465; DB 5; Length 153;
Best Local Similarity 98.8%; Pred. No. 1.2e-47;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLMY 60
DB 49 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLMY 108

QY 61 CAPLKPAAKSARSVRAQRHTDMPKTQK 86
DB 109 CAPLKPAAKSARSVRAQRHTDMPKTQK 134

RESULT 6
US-09-142-583A-11
Sequence 11, Application US/09142583A
Patent No. 6221842
GENERAL INFORMATION:
APPLICANT: GOLDSPIRK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & VANDERHAYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
STATE: VA
COUNTRY: USA
ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
REFERENCE/DOCKET NUMBER: 117-263
TELECOMMUNICATION INFORMATION:
TELEPHONE: 7038164100
TELEFAX: 7038164100
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 156 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-142-583A-11

Query Match 77.2%; Score 465; DB 3; Length 156;
Best Local Similarity 98.8%; Pred. No. 1.2e-47;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDLRLRLMY 60
DB 52 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDLRLRLMY 111
QY 61 CAPLKPAAKARSVRAQRHTDMPKTOK 86
DB 112 CAPLKPAAKARSVRAQRHTDMPKTOK 137

RESULT 7
5405942-1
Patent No. 5405942
APPLICANT: BELL, GRAEME I.; RALL, LESLIE B.; MERRYWEATHER,
JAMES P.
TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS
1 AND 11
NUMBER OF SEQUENCES: 16
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/65,673
FILING DATE: 16-JUN-1987
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 630,557
FILING DATE: 19-JUL-1984
SEQ ID NO: 1:
LENGTH: 119
5405942-1

Query Match 76.1%; Score 458; DB 6; Length 119;
Best Local Similarity 97.7%; Pred. No. 5.9e-47;
Matches 84; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDLRLRLMY 60
DB 15 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDLRLRLMY 74
QY 61 CAPLKPAAKARSVRAQRHTDMPKTOK 86
DB 75 CAPLKPAAKARSVRAQRHTDMPKTOK 100

RESULT 8
US-08-989-251-41
Sequence 41, Application US/08989251
Patent No. 6017731
GENERAL INFORMATION:
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/989,251
FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175

INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-989-251-41

Query Match 75.5%; Score 454.5; DB 3; Length 191;
Best Local Similarity 97.7%; Pred. No. 2.7e-46;
Matches 85; Conservative 1; Mismatches 0; Indels 1; Gaps 1;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDLRLRLMY 60
DB 66 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDLRLRLMY 145
QY 61 CAPLKPAAKAA-RSVRAQRHTDMPKTOK 86
DB 146 CAPLKPAAKARSVRAQRHTDMPKTOK 172

RESULT 9
US-09-340-250-41
Sequence 41, Application US/09340250
Patent No. 6083723
GENERAL INFORMATION:
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/340,250
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/989,251
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 881 3175
TELEFAX: 919 420 2202
INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-340-250-41

Query Match 75.5%; Score 454.5; DB 3; Length 191;
Best Local Similarity 97.7%; Pred. No. 2.7e-46;
Matches 85; Conservative 1; Mismatches 0; Indels 1; Gaps 1;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDLRLRLMY 60
DB 86 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQGTGIVDECCFRSCDLRLRLMY 145
QY 61 CAPLKPAAKAA-RSVRAQRHTDMPKTOK 86

Db 146 CAPLKPAAKSAKSVRAQRHTDMPKTX 172

RESULT 10
US-09-528-108-41
Sequence 41, Application US/09528108
Patent No. 6312923
GENERAL INFORMATION:
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/528,108
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/989,251
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Spurrill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-528-108-41

Query Match 75.5%; Score 454.5; DB 4; Length 191;
Best Local Similarity 97.7%; Pred. No. 2,7e-46;
Matches 85; Conservative 1; Mismatches 0; Indels 1; Gaps 1;

QY 1 GPETLCAELVDALQFYCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLRYMTY 60
DB 86 GPETLCAELVDALQFYCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLRYMTY 145

QY 61 CAPLKPAAKSAKSVRAQRHTDMPKTX 86
DB 146 CAPLKPAAKSAKSVRAQRHTDMPKTX 172

RESULT 11
US-08-460-890A-47
Sequence 47, Application US/08460890A
Patent No. 5994109
GENERAL INFORMATION:
APPLICANT: Wco, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gotchaik, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:

ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: PastSeq for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/460,890A
FILING DATE: June 5, 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Waiburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/066
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-460-890A-47

Query Match 67.9%; Score 409; DB 2; Length 78;
Best Local Similarity 96.1%; Pred. No. 2.4e-41;
Matches 74; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 4 TLGCAELVDALQFYCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLRYMTYCAP 63
DB 2 TLGCAELVDALQFYCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLRYMTYCAP 61

QY 64 LKPAAKSAKSVRAQRHTD 80
DB 62 LKPAAKSAKSVRAQRHTD 78

RESULT 12
US-08-167-641C-47
Sequence 47, Application US/08167641C
Patent No. 6033884
GENERAL INFORMATION:
APPLICANT: Wco, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gotchaik, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.

ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: Fastseq for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/167,641C
FILING DATE: December 14, 1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 205/012
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-167-641C-47

Query Match 67.9%; Score 409; DB 3; Length 78;
Best Local Similarity 96.1%; Pred. No. 2,4e-41;
Matches 74; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 4 TLGGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLIEMVCA 63
DB 2 TLGGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLIEMVCA 61

QY 64 LKPAKARSYVARQHTD 80
DB 62 LRPASARSYVARQHTD 78

RESULT 13

US-08-460-971A-47
Sequence 47, Application US/08460971A
Patent No. 6150168
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchaik, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
CITY: Suite 4700
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: Fastseq for Windows 2.0
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/460,971A
FILING DATE: June 5, 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/063
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-460-971A-47

Query Match 67.9%; Score 409; DB 3; Length 78;
Best Local Similarity 96.1%; Pred. No. 2,4e-41;
Matches 74; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 4 TLGGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLIEMVCA 63
DB 2 TLGGAEIVDALQFVCGRGFFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLIEMVCA 61

QY 64 LKPAKARSYVARQHTD 80
DB 62 LRPASARSYVARQHTD 78

RESULT 14

US-08-462-040-47
Sequence 47, Application US/08462040
Patent No. 6177554
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchaik, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
CITY: Suite 4700
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: Fastseq for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/462,040
FILING DATE: June 5, 1995
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993

APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/078
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-462-040-47

Query Match 67.9%; Score 409; DB 3; Length 78;
Best Local Similarity 96.1%; Pred. No. 2.4e-41;
Matches 74; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

QY 4 TLGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLEMYCAP 63
DB 2 TLGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLEMYCAP 61
QY 64 LKPAKAAARSVRAQRHTD 80
DB 62 LRPARSARSVRAQRHTD 78

RESULT 15

US-07-953-230A-9
Sequence 9, Application US/07953230A
Patent No. 5476779

GENERAL INFORMATION:

APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021

INFORMATION FOR SEQ ID NO: 9:

SEQUENCE CHARACTERISTICS:
LENGTH: 176 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear

MOLECULE TYPE: protein
US-07-953-230A-9

Query Match 66.1%; Score 398; DB 1; Length 176;
Best Local Similarity 62.8%; Pred. No. 1.3e-39;
Matches 76; Conservative 9; Mismatches 20; Indels 16; Gaps 1;

QY 1 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLEMY 60
DB 45 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLEMY 104
QY 61 CAPLKPAKAAARSVRAQRHTDMPKTKY-----QPSITNKKMSQRRK 104
DB 105 CAPLKPAKAAARSVRAQRHTDMPKTKYSTAVQSVDRGTERTAQHDPKTKPKKEVVKNS 164
QY 105 S 105
DB 165 S 165

Search completed: March 3, 2004, 08:06:38
Job time: 15.0422 secs

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OM protein - protein search, using sw model

Run on: March 3, 2004, 07:50:54 ; Search time 48.1446 Seconds
(Without alignments)
651.429 Million cell updates/sec

Title: US-09-852-261-6

Perfect score: 602

Sequence: 1 GPETLGAELVDALQFVCGD.....TNRKMKSGRRRKSTFPEHK 111

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_29Jan04:*

1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	602	100.0	111	4	AAE02449 Rabbit IG
2	602	100.0	111	5	AAU10561 Rabbit me
3	602	100.0	111	7	ABR63169 Rabbit me
4	602	100.0	121	2	AAW23301 Rabbit in
5	572.5	95.1	110	4	AAE02447 Human IGF
6	572.5	95.1	110	5	AAU10559 Human mec
7	572.5	95.1	110	7	ABR63167 Human mec
8	539	89.5	133	6	ABP58805 Mouse ins
9	539	89.5	133	7	ADA23374 Mouse WGF
10	536	89.0	135	1	AAU10561 Sequence
11	512	85.0	111	4	AAE02448 Rat IGF-I
12	512	85.0	111	5	AAU10560 Rat mecha
13	512	85.0	111	7	ABR63168 Rat mecha
14	508	84.4	181	7	ADP57466 Rat prote
15	488	77.7	105	4	AAE02452 Rabbit li
16	488	77.7	105	5	AAU10564 Rabbit in
17	465	77.2	105	5	AAE02450 Human liv
18	465	77.2	105	5	AAU10562 Human ins
19	465	77.2	105	5	AAU10562 Human ins
20	465	77.2	105	4	ABR63172 Rabbit li
21	465	77.2	137	4	AAU09067 Human ins
22	465	77.2	153	2	AAH83893 Insulin-1
23	465	77.2	153	2	AAW69733 Human IGF
24	465	77.2	153	2	AAW57882 Human IGF
25	465	77.2	153	5	AAU84284 Human end

26	465	77.2	153	5	AAU84341 Protein I
27	465	77.2	153	6	ADA26451 Human ins
28	465	77.2	153	7	ADCS9343 Human ins
29	465	77.2	153	7	ADD25494 Binding d
30	465	77.2	156	2	AAW23302 Human ins
31	462	76.7	105	4	AAE02456 Rabbit li
32	458	76.1	119	2	AAPE0578 Human pre
33	455	75.7	154	2	AAE02454 Goat Innu
34	454.5	75.5	191	2	AAH64068 Chimeric
35	454.5	75.5	191	5	AAE24861 Yeast alp
36	450	74.8	127	7	ADA23373 Mouse ins
37	447	74.3	153	7	ADA247095 Rat prote
38	420	69.8	105	4	AAE02451 Rat liver
39	420	69.8	105	5	AAE02451 Rat liver
40	420	69.8	105	5	AAU10563 Rat insul
41	420	69.8	105	7	ABR63171 Rat liver
42	409	67.9	78	3	AAH98462 Pept 17 us
43	409	67.9	78	4	AAH99027 Peptide 1
44	409	67.9	78	4	AAH45835 Nucleic a
45	409	67.9	78	4	AAU04272 Nuclear 1

ALIGNMENTS

RESULT 1	AAE02449	standard; protein; 111 AA.
ID	AAE02449	
XX	AAE02449;	
AC	10-AUG-2001	(first entry)
XX		
DT		
XX		
DE	Rabbit IGF-I isoform mechano-growth factor (MGF) protein.	
XX		
KM	Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF;	
KM	mechano-growth factor; neurological disorder; neurodegenerative disorder;	
KM	amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;	
KM	poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;	
KM	nerve damage; autosomal muscular dystrophy; diabetic neuropathy;	
KM	sex-linked muscular dystrophy; peripheral neuropathy;	
XX	Alzheimer's disease; Parkinson's disease.	
XX		
OS	Oryzotolagus cuniculus.	
XX		
PN	W0200136483-A1.	
XX		
PD	25-MAY-2001.	
XX		
PF	15-NOV-2000; 2000MO-GB004354.	
XX		
PR	15-NOV-1999; 99GB-00026968.	
XX		
PA	(UNLO) UNIV COLLEGE LONDON.	
XX		
PI	Goldspink G, Johnson I;	
XX		
XX	WPI: 2001-355620/37.	
DR	N-PSDB; AAD06400.	
XX		
PT	Use of mechano-growth factor, an isoform of insulin-like Growth Factor-I,	
PT	capable of reducing motoneurone loss, in the manufacture of a medicament	
PT	for the treatment of neurological disorder.	
XX		
PS	Claim 4; Page 54; 66pp; English.	
XX		
CC	The present invention relates to use of mechano-growth factor (MGF), an	
CC	insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a	
CC	medicament for the treatment of neurological disorder. The MGF is capable	
CC	of reducing motoneurone loss by 20% or greater in response to nerve	
CC	avulsion, and effects motoneurone rescue, preferably adult motoneurone	
CC	rescue. The MGF polynucleotide and polypeptide are useful in the	
CC	manufacture of a medicament for the treatment of a neurological disorder,	

CC including a disorder of motoneurons and/or neurodegenerative disorder,
 CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
 CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
 CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
 CC toxin, motoneuron trauma, a motoneuron lesion or nerve damage, an
 CC injury that affects motoneurons, motoneuron loss associated with aging,
 CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
 CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
 CC present sequence is rabbit IGF-I isoform MGF. MGF is a muscle isoform
 CC having extracellular (EC) domain, hence also referred as IGF-I-EC. The
 CC MGF protein comprises amino acid sequences encoded by nucleic acid
 CC sequence of IGF-I exons 4, 5 and 6 in the reading frame of MGF

XX Sequence 111 AA;

Query Match 100.0%; Score 602; DB 4; Length 111;
 Best Local Similarity 100.0%; Pred. No. 2.6e-54;
 Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDGRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLNMY 60
 DB 1 GPEITCGAEIVDALQFVCGDGRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLNMY 60

QY 61 CAPLKPAAKARSVRAQHTDMPKTKYQPPSTNKKMKSGRRKSGTFEEHK 111
 DB 61 CAPLKPAAKARSVRAQHTDMPKTKYQPPSTNKKMKSGRRKSGTFEEHK 111

RESULT 2
 AAU10561
 ID AAU10561 standard; protein; 111 AA.

XX AAU10561;

XX 25-FEB-2002 (first entry)

XX Rabbit mechano-growth factor (MGF) polypeptide.

XX Rabbit; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
 KM neuroprotective; nerve damage; peripheral nervous system; nerve severing;
 KM muscle; neurological disorder; motoneuron loss; motoneuron disorder;
 KM nerve avulsion.

XX Oryctolagus cuniculus.

XX WO200185781-A2.

XX 15-NOV-2001.

XX 10-MAY-2001; 2001MO-GB002054.

XX 10-MAY-2000; 2000GB-00011278.

XX (UNLO) UNIV COLLEGE LONDON.

XX (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.

XX Goldspink G, Terenghi G;

XX WPI; 2002-055585/07.

XX N-PSDB; AAS16879.

XX Use of insulin-like growth factor-I (IGF-I) isoform known as mechano
 PT growth factor which is encoded by IGF-I exons 4,5,6 and has ability to
 PT reduce motoneuron loss in response to nerve avulsion, to treat nerve
 PT damage.

XX Claim 11; Fig 7; 65pp; English.

XX The invention relates to the use of an insulin-like growth factor I (IGF-I)
 CC isoform, known as mechano-growth factor (MGF), in the manufacture of a
 CC medicament for treating nerve damage in the peripheral nervous system, or
 CC for treating nerve damage by localising MGF at the site of damage. The
 CC nerve damage may include severing of a nerve. The treatment may be

CC combined with another treatment (such as a polypeptide growth factor
 CC other than MGF) that prevents or diminishes degeneration of the target
 CC organ (for example, muscle) which the damaged nerve innervates, whereby
 CC the treatment of the muscle with MGF or a polynucleotide encoding MGF
 CC prevents or diminishes degeneration. The method is useful for treating
 CC neurological disorders, preferably motoneuron disorders. These methods
 CC can reduce motoneuron loss by 20% or greater in response to nerve
 CC avulsion. This sequence represents the rabbit MGF polypeptide

XX Sequence 111 AA;

Query Match 100.0%; Score 602; DB 5; Length 111;
 Best Local Similarity 100.0%; Pred. No. 2.6e-54;
 Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDGRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLNMY 60
 DB 1 GPEITCGAEIVDALQFVCGDGRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLNMY 60

QY 61 CAPLKPAAKARSVRAQHTDMPKTKYQPPSTNKKMKSGRRKSGTFEEHK 111
 DB 61 CAPLKPAAKARSVRAQHTDMPKTKYQPPSTNKKMKSGRRKSGTFEEHK 111

RESULT 3

ABR63169
 ID ABR63169 standard; protein; 111 AA.

XX ABR63169;

XX 18-DEC-2003 (first entry)

XX Rabbit mechano growth factor (C-terminal end).

XX Mechano growth factor; MGF; insulin-like growth factor I; rabbit;
 KM splice variant; cardiac; vasotropic; gene therapy.

XX Oryctolagus cuniculus.

XX WO2003066082-A1.

XX 14-AUG-2003.

XX 06-FEB-2003; 2003WO-GB000537.

XX 07-FEB-2002; 2002GB-00002906.

XX (UNLO) UNIV COLLEGE LONDON.

XX (UNII) UNIV ILLINOIS FOUNDR.

XX Goldspink G, Goldspink P;

XX WPI; 2003-636936/60.

XX N-PSDB; ACF79637.

XX Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
 PT or limiting apoptosis in the myocardium, particularly for preventing or
 PT limiting myocardial damage in response to ischemia or mechanical overload
 PT of the heart.

XX Claim 5; Fig 9; 74pp; English.

XX The present sequence is that of the C-terminal end of novel rabbit
 CC mechano growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF
 CC is a splice variant and non-liver type isoform of insulin-like growth
 CC factor (IGF-I) that is activated in response to cardiac tissue damage and
 CC which has a repair function in the ischemic and/or overloaded heart. The
 CC rabbit MGF transcript has a 52 base insert in the 3 domain that alters
 CC the reading frame and hence the C-terminal end of MGF protein in
 CC comparison with other IGF-I splice variants. The invention provides use
 CC of a MGF polypeptide or polynucleotide in the manufacture of a medicament
 CC for the prevention or limitation of myocardial damage in response to
 CC ischaemia or mechanical overload of the heart by preventing or limiting

CC apoptosis in the myocardium. The MGF polypeptide, polynucleotide or
CC medicament is also useful for administration in response to a heart
CC attack

CC Sequence 111 AA;

Query Match 100.0%; Score 602; DB 7; Length 111;
Best Local Similarity 100.0%; Pred. No. 2.6e-54;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSRRAPQTGIYDECCFRSCDLRLIEMV 60
DB 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSRRAPQTGIYDECCFRSCDLRLIEMV 60
QY 61 CAPLKPAAKASVRAQRHTDMPKTKYOPSTNKKMSQRRKRGSTFEEHK 111
DB 61 CAPLKPAAKASVRAQRHTDMPKTKYOPSTNKKMSQRRKRGSTFEEHK 111

RESULT 4

ID AAM23301
AAW23301 standard; protein; 121 AA.

AC AAW23301;

DT 14-APR-1998 (first entry)

DE Rabbit insulin like growth factor 1.

KM Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder; heart;
KM neuromuscular disease.

OS Oryctolagus cuniculus.

PN WO9733997-A1.

PD 18-SEP-1997.

PF 11-MAR-1997; 97WO-GB000658.

PR 11-MAR-1996; 96GB-00005124.

PA (UNLO) ROYAL FREE HOSPITAL SCHOOL MED.

PI Goldspink G;

DR WPI; 1997-470877/43.

DR N-PSDB; AAT64893.

PT Use of insulin like growth factor I characterised by presence of Ec
PT peptide - to treat humans or animals, particularly muscle disorders,
PT heart conditions or neuromuscular diseases.

PS Disclosure; Fig 3; 33pp; English.

CC A use of insulin like growth factor I (IGF-1) has been developed, and is
CC characterised by the presence of the Ec peptide, or a functional
CC equivalent, in the treatment or therapy of a human or animal. The IGF-1
CC polypeptide can be used to treat muscular disorders, e.g. Duchenne or
CC Becker muscular dystrophy, autosomal dystrophies and related progressive
CC skeletal muscle weakness and wasting, muscle atrophy in ageing humans,
CC spinal cord injury induced muscle atrophy and neuromuscular diseases, and
CC cardiac disorders, e.g. diseases where promotion of cardiac muscle
CC protein synthesis is a beneficial treatment, cardiomyopathies and acute
CC heart failure or insult, specifically myocarditis or myocardial
CC infarction. It can also be used to promote bone fracture healing and
CC maintenance of bone in old age. The present sequence represents rabbit
CC IGF-1 used in the present specification

CC Sequence 121 AA;

Query Match 100.0%; Score 602; DB 2; Length 121;
Best Local Similarity 100.0%; Pred. No. 2.8e-54;

Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSRRAPQTGIYDECCFRSCDLRLIEMV 60

DB 11 GPEITCGAELVDALQFVCGDRGFYFNKPTGYSSRRAPQTGIYDECCFRSCDLRLIEMV 70

QY 61 CAPLKPAAKASVRAQRHTDMPKTKYOPSTNKKMSQRRKRGSTFEEHK 111
DB 71 CAPLKPAAKASVRAQRHTDMPKTKYOPSTNKKMSQRRKRGSTFEEHK 121

RESULT 5

ID AAE02447
AAE02447 standard; protein; 110 AA.

AC AAE02447;

DT 10-AUG-2001 (first entry)

DE Human IGF-1 isoform mechano-growth factor (MGF) protein.

KM Human; IGF-1 isoform; Insulin-like Growth Factor-I; MGF;

KM mechano-growth factor; neurological disorder; neurodegenerative disorder;

KM amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;

KM poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;

KM nerve damage; autosomal muscular dystrophy; diabetic neuropathy;

KM sex-linked muscular dystrophy; peripheral neuropathy;

XX Alzheimer's disease; Parkinson's disease.

XX Homo sapiens.

XX WO200136483-A1.

XX 25-MAY-2001.

XX 15-NOV-2000; 2000MO-GB004354.

XX 15-NOV-1999; 99GB-00026968.

XX (UNLO) UNIV COLLEGE LONDON.

XX Goldspink G, Johnson I;

XX WPI; 2001-355620/37.

XX N-PSDB; AAD06398.

PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
PT capable of reducing motoneurone loss, in the manufacture of a medicament
PT for the treatment of neurological disorder.

PS Claim 4; Page 50-51; 66pp; English.

CC The present invention relates to use of mechano-growth factor (MGF), an
CC Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
CC medicament for the treatment of neurological disorder. The MGF is capable
CC of reducing motoneurone loss by 20% or greater in response to nerve
CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
CC rescue. The MGF polynucleotide and polypeptide are useful in the
CC manufacture of a medicament for the treatment of a neurological disorder,
CC including a disorder of motoneurons and/or neurodegenerative disorder,
CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
CC injury that affects motoneurons, motoneurone loss associated with aging,
CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
CC present sequence is human IGF-1 isoform MGF. MGF is a muscle isoform
CC having extracellular (EC) domain, hence also referred as IGF-1-EC. The
CC MGF protein comprises amino acid sequences encoded by nucleic acid
CC sequence of IGF-1 exons 4, 5 and 6 in the reading frame of MGF
CC Sequence 110 AA;

Query Match 95.1%; Score 572.5; DB 4; Length 110;
 Best Local Similarity 96.4%; Pred. No. 2.8e-51;
 Matches 107; Conservative 1; Mismatches 2; Indels 1; Gaps 1;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEMY 60
 DB 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEMY 60

QY 61 CAPLKPAAKARSYRAQRHTDMPKTQKYPSTNKKKSGRRKGSFEEHK 111
 DB 61 CAPLKPAAKARSYRAQRHTDMPKTQKYPSTNKKKSGRRKGSFEEHK 110

RESULT 6
 AAU10559 standard; protein; 110 AA.

AC AAU10559;
 AC 25-FEB-2002 (first entry)
 DE Human mechano-growth factor (MGF) polypeptide.
 XX Human mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
 XX neuroprotective; nerve damage; peripheral nervous system; nerve severing;
 KM muscle; neurological disorder; motoneuron loss; motoneuron disorder;
 KM nerve avulsion.
 XX Homo sapiens.
 OS WO200185781-A2.
 PN 15-NOV-2001.
 PD 10-MAY-2001; 2001WO-GB002054.
 PF 10-MAY-2000; 2000GB-00011278.
 PR (UNLO) UNIV COLLEGE LONDON.
 PA (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.
 XX Goldspink G, Terenghi G;
 PI WPI; 2002-055585/07.
 DR N-PSDB; AAS16877.
 XX Use of insulin-like growth factor-I (IGF-I) isoform known as mechano
 PT growth factor which is encoded by IGF-I exons 4,5,6 and has ability to
 PT reduce motoneuron loss in response to nerve avulsion, to treat nerve
 PT damage.
 PS Claim 11; Fig 5; 65pp; English.
 XX The invention relates to the use of an insulin-like growth factor I (IGF-
 CC I) isoform, known as mechano-growth factor (MGF), in the manufacture of a
 CC medicament for treating nerve damage in the peripheral nervous system, or
 CC for treating nerve damage by localising MGF at the site of damage. The
 CC nerve damage may include severing of a nerve. The treatment may be
 CC combined with another treatment (such as a polypeptide growth factor
 CC other than MGF) that prevents or diminishes degeneration of the target
 CC organ (for example, muscle) which the damaged nerve innervates, whereby
 CC the treatment of the muscle with MGF or a polynucleotide encoding MGF
 CC prevents or diminishes degeneration. The method is useful for treating
 CC neurological disorders, preferably motoneuron disorders. These methods
 CC can reduce motoneuron loss by 20% or greater in response to nerve
 CC avulsion. This sequence represents the human MGF polypeptide
 XX
 SQ Sequence 110 AA;
 Query Match 95.1%; Score 572.5; DB 5; Length 110;
 Best Local Similarity 96.4%; Pred. No. 2.8e-51;
 Matches 107; Conservative 1; Mismatches 2; Indels 1; Gaps 1;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEMY 60
 DB 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEMY 60

QY 61 CAPLKPAAKARSYRAQRHTDMPKTQKYPSTNKKKSGRRKGSFEEHK 111
 DB 61 CAPLKPAAKARSYRAQRHTDMPKTQKYPSTNKKKSGRRKGSFEEHK 110

RESULT 7
 ABR63167 standard; protein; 110 AA.

AC ABR63167;
 AC 18-DEC-2003 (first entry)
 DE Human mechano growth factor (C-terminal end).
 XX Mechano growth factor; MGF; insulin-like growth factor I; human;
 XX splice variant; cardiac; vasotropic; gene therapy.
 OS Homo sapiens.
 XX WO2003066082-A1.
 PN 14-AUG-2003.
 PD 06-FEB-2003; 2003WO-GB000537.
 PF 07-FEB-2002; 2002GB-00002906.
 PR (UNLO) UNIV COLLEGE LONDON.
 PA (UNII) UNIV ILLINOIS FOUNDD.
 XX Goldspink G, Goldspink P;
 PI WPI; 2003-636936/60.
 DR N-PSDB; ACF79635.
 XX Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
 PT or limiting apoptosis in the myocardium, particularly for preventing or
 PT limiting myocardial damage in response to ischemia or mechanical overload
 PT of the heart.
 PS Claim 5; Fig 7; 74pp; English.
 XX The present sequence is that of the C-terminal end of novel human mechano
 CC growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF is a
 CC splice variant and non-liver type isoform of insulin-like growth factor
 CC (IGF-I) that is activated in response to cardiac tissue damage and which
 CC has a repair function in the ischaemic and/or overloaded heart. The human
 CC MGF transcript has a 49 base insert in the B domain that alters the
 CC reading frame and hence the C-terminal end of MGF protein in comparison
 CC with other IGF-I splice variants. The invention provides use of a MGF
 CC polypeptide or polynucleotide in the manufacture of a medicament for the
 CC prevention or limitation of myocardial damage in response to ischaemia or
 CC mechanical overload of the heart by preventing or limiting apoptosis in
 CC the myocardium. The MGF polypeptide, polynucleotide or medicament is also
 CC useful for administration in response to a heart attack
 XX
 SQ Sequence 110 AA;
 Query Match 95.1%; Score 572.5; DB 7; Length 110;
 Best Local Similarity 96.4%; Pred. No. 2.8e-51;
 Matches 107; Conservative 1; Mismatches 2; Indels 1; Gaps 1;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEMY 60
 DB 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRLLEMY 60

QY 61 CAPLKPAAKARSYRAQRHTDMPKTQKYPSTNKKKSGRRKGSFEEHK 111

Db 61 CAPLKPAKASASVRAQRHTDMPKTKYQPPSTNKTAKSQ-RRKSGTTEEHK 110

RESULT 8
ABP58085
ID ABP58085 standard; protein, 133 AA.

XX ABP58085;

XX 07-MAR-2003 (first entry)

XX Mouse insulin-like growth factor IB.

XX Insulin-like growth factor IB; IGF-IB; mouse; mRNA; assay;
XX nucleic acid detection.

XX Mus musculus.

XX MO200297380-A2.

XX 05-DEC-2002.

XX 31-MAY-2002; 2002WO-SB001056.

XX 01-JUN-2001; 2001SE-00001934.

XX (BIOV-) BIOVITRUM AB.

XX Parrow V, Rosengren LJ;

XX WPI; 2003-129529/12.

XX N-PSDB; ABV76185.

PT Quantitating a target nucleic acid in a sample comprises immobilizing, on
PT a solid support, a sample comprising a target nucleic acid, and detecting
PT and quantitating signals generated from the antisense and sense probes.

XX Example 1; Page 17; 18pp; English.

CC The present sequence is the protein sequence of murine insulin-like
CC growth factor IB (IGF-IB). IGF-IB cDNA was used in an example of the
CC method of the invention to generate probes for determination of IGF-IB
CC RNA. The method comprises a quantitative hybridisation assay for analysis
CC of mRNA in a target nucleic acid (RNA) sample. It involves: (i)
CC immobilising the RNA sample on a solid support; (ii) contacting a
CC labelled antisense probe to a first portion of the RNA, and a labelled
CC sense probe to a second portion of the RNA; (iii) detecting and
CC quantitating the signals generated by the antisense probe signal minus the
CC determining the value represented by the antisense probe signal minus the
CC sense probe signal, the value being proportional to the amount of mRNA in
CC the RNA sample. In an example of the method, a cDNA clone containing 60
CC nucleotides from exon 2 and 179 nucleotides from exon 3 of the mouse IGF-
CC IB gene was cloned into pGEM-4Z vector. Linearisation of the plasmid with
CC EcoRI allowed transcription of a 250-nucleotide antisense probe using T7
CC polymerase. Linearisation with HindIII allowed transcription of a sense
CC probe of similar length using SP6 polymerase (see ABV76186). The probes
CC were purified and used to determine IGF-I RNA in mouse hepatocytes and
CC also in rat hepatocytes

XX Sequence 133 AA;

Query Match 89.5%; Score 539; DB 6; Length 133;
Best Local Similarity 91.0%; Pred. No. 9.8e-48;
Matches 101; Conservative 1; Mismatches 9; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDECCFRSCDLRLREMY 60

DB 23 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDECCFRSCDLRLREMY 82

QY 61 CAPLKPAKASASVRAQRHTDMPKTKYQPPSTNKTAKSQ-RRKSGTTEEHK 111

DB 83 CAPLKPAKASASVRAQRHTDMPKTKYQPPSTNKTAKSQ-RRKSGTTEEHK 133

RESULT 9
ADA23374
ID ADA23374 standard; protein, 133 AA.

XX ADA23374;

XX 20-NOV-2003 (first entry)

XX Mouse MGF amino acid sequence.

XX ligand; antibody; mechano-growth factor; MGF; inotropic; cardiact;

XX cell signaling; muscle damage; muscular dystrophy; cardiac muscle damage;

XX muscle fatigue; heart attack.

XX Mus sp.

XX MO2003068949-A1.

XX 21-AUG-2003.

XX 14-FEB-2003; 2003WO-GB000657.

XX 14-FEB-2002; 2002GB-00003552.

XX (BEAU/) BEAUMONT N.

XX Beaumont N;

XX WPI; 2003-679637/64.

PT New peptides corresponding to the C terminus of creatine kinase have a
PT similar function to mechano-growth factor and are useful to treat muscle
PT damage such as exercise injury, muscular dystrophy and heart attack

XX Disclosure; Fig 1; 21pp; English.

CC The present invention describes an isolated peptide capable of acting as
CC a ligand for an antibody with affinity for the C-terminus of mechano-
CC growth factor (MGF), for use in therapy, where the peptide is not MGF.
CC Also described is an isolated peptide for use in therapy comprising the
CC sequence (1) (X1)m(X2)n(X3)G(X4)(X5)(X6)(X7)2(X8)p, where X1 = a basic
CC residue, X2 and X8 = any amino acid, X3 and X4 = Lys or Gln, X5 = Ser,
CC Thr, Ala or Pro, X6 = Ile, Phe or Leu, X7 = Asp or Glu, m = 2 or 3, n = 0
CC -2, and p = 2-6. (1) has inotropic and cardiact activities, and can be
CC used in cell signaling. (1) can be used for the manufacture of a
CC composition for the treatment of muscle damage, deterioration or injury,
CC particularly damage to skeletal muscle, especially muscular dystrophy or
CC damage to cardiac muscle, and to manufacture a composition for the repair
CC of damage or loss of nerve cells. The peptide can be used in cell culture
CC media to promote growth of muscle or nerve cell lines. The peptides are
CC used to treat conditions associated with muscle fatigue and/or injury for
CC example during exercise, and to treat muscle deterioration or damage for
CC example after a heart attack. They may be useful to identify agents that
CC potentiate or inhibit muscle or nerve cell growth, as a treatment to
CC promote growth or repair of muscle or nerve cells in vivo and to inhibit
CC apoptosis of precursor cells. The present sequence represents a mouse MGF
CC amino acid sequence, which is given in comparison with mouse insulin
CC growth factor 1 (IGF1) in the exemplification of the present invention.

XX Sequence 133 AA;

Query Match 89.5%; Score 539; DB 7; Length 133;
Best Local Similarity 91.0%; Pred. No. 9.8e-48;
Matches 101; Conservative 1; Mismatches 9; Indels 0; Gaps 0;

QY 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDECCFRSCDLRLREMY 60

DB 23 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDECCFRSCDLRLREMY 82

QY 61 CAPLKPAKASASVRAQRHTDMPKTKYQPPSTNKTAKSQ-RRKSGTTEEHK 111

Db 83 CAPLKPTKARSIRAOGHTDMPXTOKSPSLSTNKTCLORRRKGSFPEEHK 133

RESULT 10
AAP70277
ID AAP70277 standard; protein; 195 AA.
XX
XX AAP70277;
AC
XX
XX 25-MAR-2003 (revised)
DT 05-APR-1991 (first entry)
XX
XX Sequence of pre-pro-insulin-like growth factor 1B (pIGF-1B).
DE
XX Growth promoter; lactation enhancer; cell proliferation.
XX
XX Homo sapiens.
OS
XX
XX EP229750-A.
PN
XX 22-UTL-1987.
PD
XX
XX 06-JAN-1987; 87EP-00870001.
PF
XX
XX 07-JAN-1986; 86US-00816662.
PR 20-NOV-1986; 86US-00929671.
XX
XX (UNITW) UNIV WASHINGTON.
PA
XX
XX Krivl GG, Rotwein PS;
PI
XX
XX WPI; 1987-200203/29.
DR
XX
XX New pre-pro-insulin-like growth factor-1 protein - cbrd. by recombinant
PT DNA procedures for use as growth promoters for enhancing lactation, for
PT stimulating cell proliferation etc.
XX
XX
XX Claim 11; Fig 6; 59pp; English.
PS
XX
XX A 42 base oligonucleotide corresponding to the DNA sequence encoding
CC amino acids 10 to 23 of mature human IGF-I was synthesized (AA70437).
CC The radiolabeled 42 mer was then employed to screen for IGF-I containing
CC DNA sequences in a human liver cDNA library. Insulin-like growth factors
CC -1A and -1B cDNAs were isolated from a human cDNA library by using
CC lambda8gt 11 (AA70435, AA70436). The human IGF-1 genomic gene was
CC isolated and mapped. It encodes at least two preproinsulin-like growth
CC factor-1 proteins. An essentially pure preproinsulin-like growth factor-1
CC protein comprising the sequence of amino acids shown in Figure six is
CC claimed (AAP70277). (Updated on 25-MAR-2003 to correct PA field.)
CC
XX
XX Sequence 195 AA;
SQ

Query Match 89.0%; Score 536; DB 1; Length 195;
Best Local Similarity 96.1%; Pred. No. 3e-47; 2; Indels 0; Gaps 0;
Matches 98; Conservative 2; Mismatches 2;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDCCFRSCDLRLLEY 60
DB 49 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDCCFRSCDLRLLEY 108
QY 61 CAPLKPARKASVRAOGRHTDMPXTOKYQPPSTNKKKSQRRK 102
DB 109 CAPLKPARKASVRAOGRHTDMPXTOKYQPPSTNKKKSQRRK 150

RESULT 11
AAE02448
ID AAE02448 standard; protein; 111 AA.
XX
XX AAE02448;
AC
XX
XX 10-AUG-2001 (first entry)
DT

XX
DE Rat IGF-I isoform mechano-growth factor (MGF) protein.
XX
XX Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
XX mechano-growth factor; neurological disorder; neurodegenerative disorder;
XX amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
XX poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
XX nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
XX sex-linked muscular dystrophy; peripheral neuropathy;
XX Alzheimer's disease; Parkinson's disease.
XX
XX Rattus sp.
XX
XX W0200136483-A1.
XX
XX 25-MAY-2001.
XX
XX 15-NOV-2000; 2000WO-GB004354.
XX
XX 15-NOV-1999; 99GB-00026968.
XX
XX (UNLO) UNIV COLLEGE LONDON.
XX
XX Goldspink G, Johnson I;
XX
XX WPI; 2001-355620/37.
XX
XX N-PSDB; AAD06399.
XX
XX
XX Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
XX capable of reducing motoneurone loss, in the manufacture of a medicament
XX for the treatment of neurological disorder.
XX
XX
XX Claim 4; Page 52; 66pp; English.
PS
XX
XX The present invention relates to use of mechano-growth factor (MGF), an
XX Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
XX medicament for the treatment of neurological disorder. The MGF is capable
XX of reducing motoneurone loss by 20% or greater in response to nerve
XX avulsion, and effects motoneurone rescue, preferably adult motoneurone
XX rescue. The MGF polynucleotide and polypeptide are useful in the
XX manufacture of a medicament for the treatment of a neurological disorder,
XX including a disorder of motoneurons and/or neurodegenerative disorder,
XX e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
XX spinal muscular atrophy, infantile or juvenile muscular atrophy,
XX poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
XX toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
XX injury that affects motoneurons, motoneurone loss associated with aging,
XX autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
XX peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
XX present sequence is rat IGF-I isoform MGF. MGF is a muscle isoform having
XX extracellular (EC) domain, hence also referred as IGF-1-EC. The MGF
XX protein comprises amino acid sequences encoded by nucleic acid sequence
XX of IGF-I exons 4, 5 and 6 in the reading frame of MGF
XX
XX Sequence 111 AA;
SQ

Query Match 85.0%; Score 512; DB 4; Length 111;
Best Local Similarity 86.5%; Pred. No. 4.9e-45;
Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;

QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDCCFRSCDLRLLEY 60
DB 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTIVDCCFRSCDLRLLEY 60
QY 61 CAPLKPARKASVRAOGRHTDMPXTOKYQPPSTNKKKSQRRKGSFPEEHK 111
DB 61 CVRCKPTKARSIRAOGRHTDMPXTOKSPSLSTNKTCLORRRKGSFPEEHK 111

RESULT 12
AAU10560
ID AAU10560 standard; protein; 111 AA.
XX
XX

AC AAD10560;
 XX
 XX 25-FEB-2002 (first entry)
 DT
 XX
 DE Rat mechano-growth factor (MGF) polypeptide.
 XX
 XX Rat; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
 KM neuroprotective; nerve damage; peripheral nervous system; nerve severing;
 KM muscle; neurological disorder; motoneuron loss; motoneuron disorder;
 XX nerve avulsion.
 OS
 XX Rattus sp.
 EN WO200185781-A2.
 XX
 XX 15-NOV-2001.
 PD
 XX 10-MAY-2001; 2001WO-GB002054.
 PF
 XX 10-MAY-2000; 2000GB-00011278.
 PR
 XX (UNLO) UNIV COLLEGE LONDON.
 PA (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.
 XX
 XX Goldspink G, Terenghi G;
 PI
 XX WPI: 2002-055595/07.
 DR N-PSDB; AAS16878.
 DR
 PT Use of insulin-like growth factor-I (IGF-I) isoform known as mechano
 PT growth factor which is encoded by IGF-I exons 4,5,6 and has ability to
 PT reduce motoneuron loss in response to nerve avulsion, to treat nerve
 PT damage.
 PS
 XX Claim 11; Fig 6; 65pp; English.
 XX
 CC The invention relates to the use of an insulin-like growth factor I (IGF-
 CC I) isoform, known as mechano-growth factor (MGF), in the manufacture of a
 CC medicament for treating nerve damage in the peripheral nervous system, or
 CC for treating nerve damage by localising MGF at the site of damage. The
 CC nerve damage may include severing of a nerve. The treatment may be
 CC combined with another treatment (such as a polypeptide growth factor
 CC other than MGF) that prevents or diminishes degeneration of the target
 CC organ (for example, muscle) which the damaged nerve innervates, whereby
 CC the treatment of the muscle with MGF or a polynucleotide encoding MGF
 CC prevents or diminishes degeneration. The method is useful for treating
 CC neurological disorders, preferably motoneuron disorders. These methods
 CC can reduce motoneuron loss by 20% or greater in response to nerve
 CC avulsion. This sequence represents the rat MGF polypeptide
 CC
 XX
 SQ Sequence 111 AA;
 Query Match 85.0%; Score 512; DB 5; Length 111;
 Best Local Similarity 86.5%; Pred. No. 4.9e-45;
 Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;
 QY 1 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTGIVDECFFRSCDLRLLEY 60
 DB 1 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTGIVDECFFRSCDLRLLEY 60
 QY 61 CAPLPKAAASVRAQRHTDMPKTKOKYOPSTNKKMSQRRKSGTLEEHK 111
 DB 61 CVRCPTKSARSIRARHTDMPKTKOKYOPSTNKKMSQRRKSGTLEEHK 111
 RESULT 13
 ID ABR63168 standard; protein; 111 AA.
 XX ABR63168;
 AC ABR63168;
 XX
 DT 18-DEC-2003 (first entry)
 XX

DE Rat mechano growth factor (C-terminal end).
 XX
 XX Mechano growth factor; MGF; insulin-like growth factor I; rat;
 KM splice variant; cardiant; vasotropic; gene therapy.
 XX
 OS Rattus sp.
 XX
 XX WO2003066082-A1.
 PN
 XX 14-AUG-2003.
 PD
 XX
 XX 06-FEB-2003; 2003WO-GB000537.
 PF
 XX 07-FEB-2002; 2002GB-00002906.
 PR
 XX (UNLO) UNIV COLLEGE LONDON.
 PA (UNITI) UNIV ILLINOIS FOUND.
 XX
 XX Goldspink G, Goldspink P;
 PI
 XX WPI: 2003-636936/60.
 DR N-PSDB; ACF79636.
 DR
 PT Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
 PT or limiting apoptosis in the myocardium, particularly for preventing or
 PT limiting myocardial damage in response to ischemia or mechanical overload
 PT of the heart.
 PS
 XX Claim 5; Fig 8; 74pp; English.
 XX
 CC The present sequence is that of the C-terminal end of novel rat mechano
 CC growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF is a
 CC splice variant and non-liver type isoform of insulin-like growth factor
 CC (IGF-I) that is activated in response to cardiac tissue damage and which
 CC has a repair function in the ischemic and/or overloaded heart. The rat
 CC MGF transcript has a 52 base insert in the B domain that alters the
 CC reading frame and hence the C-terminal end of MGF protein in comparison
 CC with other IGF-I splice variants. The invention provides use of a MGF
 CC polypeptide or polynucleotide in the manufacture of a medicament for the
 CC prevention or limitation of myocardial damage in response to ischemia or
 CC mechanical overload of the heart by preventing or limiting apoptosis in
 CC the myocardium. The MGF polypeptide, polynucleotide or medicament is also
 CC useful for administration in response to a heart attack
 CC
 XX
 SQ Sequence 111 AA;
 Query Match 85.0%; Score 512; DB 7; Length 111;
 Best Local Similarity 86.5%; Pred. No. 4.9e-45;
 Matches 96; Conservative 3; Mismatches 12; Indels 0; Gaps 0;
 QY 1 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTGIVDECFFRSCDLRLLEY 60
 DB 1 GPEITLGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTGIVDECFFRSCDLRLLEY 60
 QY 61 CAPLPKAAASVRAQRHTDMPKTKOKYOPSTNKKMSQRRKSGTLEEHK 111
 DB 61 CVRCPTKSARSIRARHTDMPKTKOKYOPSTNKKMSQRRKSGTLEEHK 111
 RESULT 14
 ID ADE57466 standard; protein; 181 AA.
 XX ADE57466;
 AC ADE57466;
 XX
 XX 29-JAN-2004 (first entry)
 DT
 XX Rat Protein P08024, SEQ ID NO 3327.
 DE
 XX Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;
 KM chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
 XX
 XX Rattus norvegicus.

XX PN WO2003016475-A2.
 XX PD 27-FEB-2003.
 XX 14-AUG-2002; 2002WO-US025765.
 XX 14-AUG-2001; 2001US-0312147P.
 XX 01-NOV-2001; 2001US-0346382P.
 XX 26-NOV-2001; 2001US-033347P.
 XX (GENO) GEN HOSPITAL CORP.
 XX (FARB) BAYER AG.
 XX PI Woolf C, D'Urso D, Befort K, Costigan M;
 XX DR WPI; 2003-268312/26.
 XX GENBANK; P08024.
 PT New composition comprising two or more isolated polypeptides, useful for
 PT preparing a medicament for treating pain in an animal.
 XX PS Claim 1; Page; 1017pp; English.
 XX CC The invention discloses a composition comprising two or more isolated rat
 CC or human polynucleotides or a polynucleotide which represents a fragment,
 CC derivative or allelic variation of the nucleic acid sequence. Also
 CC claimed are a vector comprising the novel polynucleotide, a host cell
 CC comprising the vector, a method for identifying a nucleotide sequence
 CC which is differentially regulated in an animal subjected to pain and a
 CC kit to perform the method, an array, a method for identifying an agent
 CC that increases or decreases the expression of the polynucleotide sequence
 CC that is differentially expressed in neuronal tissue of a first animal
 CC subjected to pain, a method for identifying a compound which regulates
 CC the expression of a polynucleotide sequence which is differentially
 CC expressed in an animal subjected to pain, a method for identifying a
 CC compound that regulates the activity of one or more of the
 CC polynucleotides, a method for producing a pharmaceutical composition, a
 CC method for identifying a compound or small molecule that regulates the
 CC activity in an animal of one or more of the polypeptides given in the
 CC specification, a method for identifying a compound useful in treating
 CC pain and a pharmaceutical composition comprising the one or more
 CC polypeptides or their antibodies. The polynucleotide or the compound that
 CC modulates its activity is useful for preparing a medicament for treating
 CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction
 CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene
 CC therapy). The sequence presented is a rat protein (shown in Table 2 of
 CC the specification) which is differentially expressed during pain. Note:
 CC The sequence data for this patent did not form part of the printed
 CC specification, but was obtained in electronic form directly from WIPO at
 CC ftp.wipo.int/pub/published_pat_sequences.
 XX SO Sequence 181 AA;
 XX Query Match 84.4%; Score 508; DB 7; Length 181;
 XX Best Local Similarity 88.7%; Pred. No. 2.1e-44;
 XX Matches 94; Conservative 4; Mismatches 8; Indels 0; Gaps 0;
 QY 1 GPEITLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEY 60
 DB 49 GPEITLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEY 108
 QY 61 CAPLKPAAKAAARSVAQRHTDMPKTKQXOPSTNKKKKKSORRRKSGT 106
 DB 109 CAPLKPAAKAAARSVAQRHTDMPKTKQXOPSTNKKKKKSORRRKSGT 154
 XX RESULT 15
 XX ID AAE02452
 XX AC AAE02452 standard; protein; 105 AA.
 XX AAE02452;
 XX

DT 10-AUG-2001 (first entry)
 XX DE Rabbit liver-type IGF-I isoform (L-IGF-I) protein.
 XX KW Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
 KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
 KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
 KW polymyositis; post-polio syndrome; toxin; motoneurone disorder;
 KW nerve damage; axosomal muscular dystrophy; diabetic neuropathy;
 KW sex-linked muscular dystrophy; peripheral neuropathy;
 KW Alzheimer's disease; Parkinson's disease; liver; L-IGF-I.
 XX OS Oryctolagus cuniculus.
 XX PN WO200136483-A1.
 XX PD 25-MAY-2001.
 XX 15-NOV-2000; 2000WO-GB004354.
 XX 15-NOV-1999; 99GB-00026968.
 XX (UNLO) UNIV COLLEGE LONDON.
 XX PA Goldspink G, Johnson I;
 XX P1 WPI; 2001-355620/37.
 XX DR N-PSDB; AAD06405.
 XX PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
 PT capable of reducing motoneurone loss, in the manufacture of a medicament
 PT for the treatment of neurological disorder.
 XX PS Disclosure; Page 60-61; 66pp; English.
 XX CC The present invention relates to use of mechano-growth factor (MGF), an
 CC Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
 CC medicament for the treatment of neurological disorder. The MGF is capable
 CC of reducing motoneurone loss by 20% or greater in response to nerve
 CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
 CC rescue. The MGF polynucleotide and polypeptide are useful in the
 CC manufacture of a medicament for the treatment of a neurological disorder,
 CC including a disorder of motoneurons and/or neurodegenerative disorder,
 CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
 CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
 CC polymyositis or post-polio syndrome, a disorder caused by exposure to a
 CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
 CC injury that affects motoneurons, motoneurone loss associated with aging,
 CC axosomal or sex-linked muscular dystrophy, diabetic neuropathy,
 CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
 CC present sequence is rabbit liver-type IGF-I isoform (L-IGF-I). The L-IGF-
 CC I protein comprises amino acid sequences encoded by nucleic acid sequence
 CC of IGF-I exons 4 and 6. Note: The present sequence (SEQ ID NO: 14) is
 CC stated as being the same as that shown in figure 10 (AAE02456) of the
 CC specification. However it differs at few positions
 XX SO Sequence 105 AA;
 XX Query Match 77.7%; Score 468; DB 4; Length 105;
 XX Best Local Similarity 100.0%; Pred. No. 1.6e-40;
 XX Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPEITLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEY 60
 DB 1 GPEITLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEY 60
 QY 61 CAPLKPAAKAAARSVAQRHTDMPKTKQX 86
 DB 61 CAPLKPAAKAAARSVAQRHTDMPKTKQX 86
 Search completed: March 3, 2004, 07:53:36
 Job time : 48.1446 secs

